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Coalescing Memory

Michael Christopher Housley
mhousle1@utk.edu

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Coalescing Memory

Michael Housley

Undergraduate Thesis

Fall 2012- Spring 2013

College of Architecture + Design

Advisors: Jennifer Akerman + Katherine Ambroziak

Following the 1986 Chernobyl Nuclear explosion, nearly 116,000 residents were evacuated from their homes; a few hundred residents, drawn by emotional connections to their homeland, illegally returned. The psychological effects on those permanently displaced from their homeland were devastating, including a loss of motivation, a desire to live, and an overall victim mind-set.

A border station at the entry to the zone encourages a contemporary engagement with a place of the past. A testament of Ukraine's ability to reclaim its physical and emotional well-being, the proposal ranges in scale from a master plan with a new village to the intimate scale of a door stoop planting within a village. The station provides space for the collection and preparation of items to be distributed within the zone, encouraging past inhabitants to return and offer physical and emotional assistance, thus recognizing their ability to impact those around them. Typical tourists are exposed to the efforts and encouraged to participate. The architecture responds to the needs of both by challenging the notion of boundary and threshold, allowing moments of interaction and shared experience.

The time within the villages encourages the exchange of stories and memories, benefiting the listener and the teller. Upon returning to the station, volunteers record the experiences and stories collected within the zone, creating a collection that provides present and future generations a place to remember, discover, and heal.



Coalescing Memory

Michael Housley
Arch 479
Professor Jennifer Akerman
Fall Semester 2012

Coalescing Memory

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What I want to investigate through this project

I have long been fascinated with the temporal qualities of human life, the quickness with which our physical, mental, and emotional being can be disrupted. Growing up with an exposure to hospital patients (my mother is a nurse) led me to develop empathy for those around me, eager to see them reach full recovery. However, my empathy transcends the warmth of humanity to the realm of stories and memories within buildings and places, silent tales that resound mankind's history.

I am intrigued with healing and restoration, a process of rehabilitation for both person and place. While humans and the majority of buildings are relatively short-lived, it is our ability to reflect upon ages past that allows our connection and understanding of the present.

Can we, like Walter Benjamin before us, recall, reexamine, and contextualize memory images from the past until they awaken in us a new path to the future? ¹



Experience of Kitty Hart



Experience of Typical Visitor

Figure 1: Experiencing a Site of Memory

You see grass, but I don't see any grass. I see mud, just a sea of mud...open my eyes and see grass. Close my eyes and see mud...I knew I ought never to have come back, because it has proved I've never been away.²

Kitty Hart (experienced during a return to Auschwitz)

Positioning

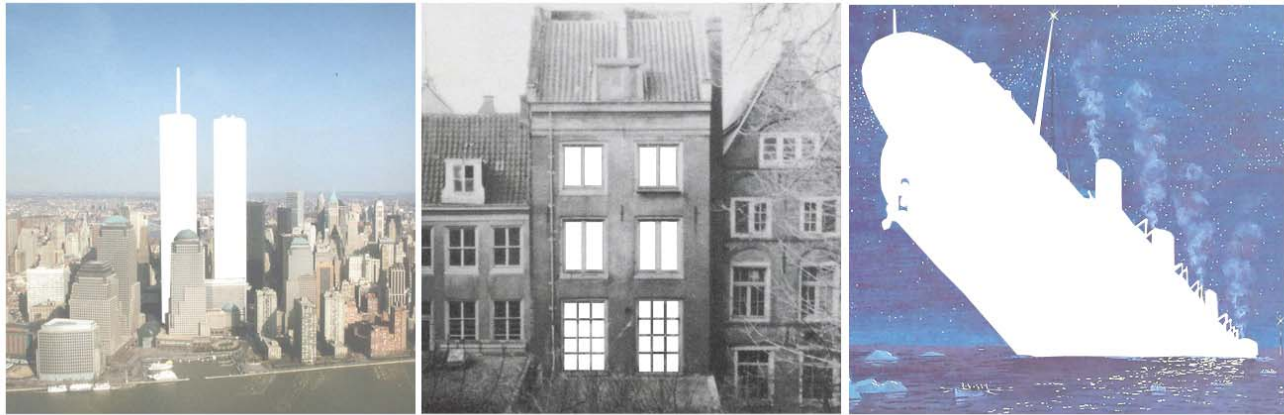
Framing

Crafting

Forming

Spaces and sites have memories, voices, and stories to tell. They influence each of us differently, but none the less their effect resonates. I intend to investigate a site's ability to evoke individual and collective memory and the role these memories play in a person's mental and emotional health. Architecture, combined with a site harboring memory, can promote a deeper understanding of past events that lead to the current condition of the site, evoke a strong connection to a specific place, and potentially alter a user's mental or emotional state.

How can architecture coalesce memory and fragments of a site's past to transform pain or confusion into a valuable experience—including a raised awareness or a moment of acceptance or reflection—that promotes emotional healing of an individual and a community?



How much is required to tell the story?

Figure 2: Telling A Story

Site Telling

Coalescing Memory explores architecture's ability to interact with the literal and symbolic value of a site to evoke individual and collective memory. I seek to understand the various mental and emotional responses that inhabiting a site and space may induce, and I aim to discover how to transform these responses to promote mental and emotional healing. Architecture plays a crucial role within the proposed experience, as it mediates the interaction of person and place.

Abandoned buildings—places forgotten and deemed irrelevant—are extremely fascinating to me. Resulting from neglect or catastrophes (either natural, man-made, or both) they are suppressed within the human consciousness yet silently remain breathing. To validate my interest with the significance a space acquires during its lifetime, it is necessary to investigate what triggers these feelings of awe and intrigue. Author Randolph Langenbach claims that historical artifacts exist as both specific concepts (meanings ascribed by humans capable of eliciting powerful emotions) and physical realities.³ I believe the presence of personal, everyday objects is required for contemporary viewers to understand how past inhabitants occupied spaces. How can these fragments trigger a viewer's personal memory and transform him into a participant to allow a better understand the significance of a place?

Positioning

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1 *Awareness*

becoming fully aware of one's emotional distress, often through a forced remembrance of a painful event



2 *Expression*

transcending the barrier between mind and emotion, intended to evoke physical expressions of the feelings to become more aware of and to begin accepting them



3 *Resolution*

finding a feeling of peacefulness and acceptance towards the event that triggered the pain; a constructive insight between the person, place and event

Figure 3: Three steps necessary for emotional healing

Healing

It is necessary to investigate perceptions of the healing process and the different phases this journey of restoration might entail. The intent of this project is not to erase existing memories, but to montage new memories with them.

Robert S. Vibert, a researcher of emotional health, identified three steps to achieve emotional healing following a trauma. *Awareness*, the first phase, constitutes a person becoming aware of their emotional distress. *Expression* entails the release of the emotion to acknowledge and begin accepting it; this phase, dependent upon particular spatial requirements that allow for quiet and uninterrupted thinking, is intended to evoke physical expression of one's feelings (crying, shouting, etc.). The final step is *Resolution*, in which one finds a feeling of peacefulness and acceptance towards the event that triggered the pain.⁴

Our Pathway Home, an online resource offering techniques to heal one's subconscious, suggests a similar three step process of restoration. Beginning with *Approach*, a person must get in touch with their despair. During the *Ignition* phase, one transcends the barrier between mind and emotion and allows his feelings to be released. Finally, in *Shifting*, a person evaluates the healing process and allows for a refreshed assessment of their perceptions.⁵

Positioning

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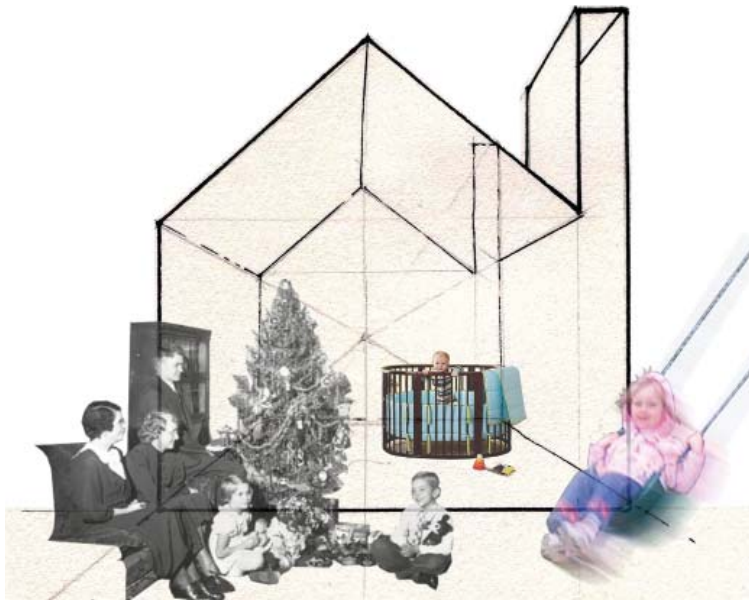


Figure 4: Spatial Framework

Memories are always anchored in spatial framework.⁶

Maurice Halbwachs
The Collective Memory

Memory

Memory was based on lived experience, something that reached out of the past and seized the individual in the manner of naïve and immediate knowledge. Memory had to be linked to lived experience, otherwise it was reduced to “history,” becoming abstract or intellectualized reconstructions, debased or faked recollections.⁷

Christine Boyer
The City of Collective Memory: Its Historical Imagery and Architectural Entertainments

Positioning

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Memory plays a crucial role within the inquiry; thus, it is necessary to consider a deeper understanding of its effects on humans. What is memory? What is required to recall someone’s memory on a particular subject? Boyer’s evocative quote suggests an irreconcilable difference between a person who experienced an event first-hand and one who relates to an event through descriptions and imagery. Can architecture encourage a connection between the two people by encouraging interaction and reliance upon one another? Without this important interchange, memories risk being lost and forgotten.



The visceral response we have to a house in the process of demolition, for example, speaks to the deep pain of loss of a place where memories were formed, and are often the most tender.⁸

Shelley Hornstein

Losing Site: Architecture, Memory and Place

Figure 5: The Loss of A Loved One

Positioning

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The Lifespan of a Building

Buildings from past generations memorialize moments and events of the past, confirming to contemporary viewers events that would otherwise seem unfathomable. For example, in Birkenau—a section of the infamous Auschwitz Concentration Camp—fragments of the structures built by the Nazis remain standing; tall brick chimneys grid the zone where the wooden bunkers once occupied, immortalizing the spaces inhabited by prisoners of war.

Just as a person is able to recollect events within their lifetime, buildings testify to their past. For a building to be maintained and respected, however, it must provide long-term use and effectively contribute to the lives of multiple generations of users. How can architecture counteract the ever-changing interests and agendas of humanity and deem its relevance to past and contemporary societies?

Nearly all buildings eventually become subject to demolition. It is important to acknowledge that once a space is razed it will never again be able to be experienced. Though memories of a place may live on within personal experiences, photography, etc., *a genuine interaction* with the place will never again be feasible. Future generations are robbed of opportunities to understand and perceive the spaces that impacted their ancestors.

Essential qualities of an Appropriate Site:

The location should support collective and individual memory by containing physical fragments of the past in order for visitors to empathize with the everyday lives of the past occupants. In addition to those associated with the trauma or catastrophe, the project attempts to provide a first-time visitor with a compelling, educational experience through an interaction with those involved first-hand.

Potential Typologies:

I was initially drawn to a genre of institutional buildings that has fascinated me for years—insane asylums and prisons. While pertinent in fostering the mental and emotional healing of an individual, they are specific to a particular user group, thus limiting their broader application to collective healing. Building types that are inherently communal include churches, educational facilities, and community centers.

While most typologies have the potential to offer remembrance and reflection, the design must transcend the everyday experience with these emotions. Though the design will inherently feature components that assist in the recollection of personal and collective experience, it must transcend the stigma of a traditional memorial as I believe this is an artificial response to the inquiry.

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The Relationship Between People and Space

Using architecture to symbolize and evoke the three phases of the healing process, it is necessary to provide spatial components that encourage constructive and creative expression of the user's emotions, encouraging them to transform a painful event or memory into something valuable.

To facilitate the *Awareness* phase, the design must trigger and encourage user's to acknowledge their feelings towards the site. The design may achieve this through various methods including physically reconnecting a person to the site of their trauma, or through a reconstruction of the events that emotionally wounded them by incorporating various media (sound recording+ film). *Resolution* requires a peaceful, reflective environment in which users can evaluate their healing journey; this can be supported both at the scale of an individual and through communal interaction during which people can tell of their journey.

The three stages of healing can be reflected and promoted through architectural intervention, encouraging the appropriate interaction between person and place. Through a *contemporary re-occupation* with a significant place of a person's past, new memories will inherently layer with previous memories. Through participating in the maintenance or restoration of a site, an individual may transform themselves from being a victim to an advocate.

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Figure 6: A Fabricated Experience

Providing the First-Time Visitor with an Educational Experience

Portions of the design's program are dedicated to helping all visitors, both previous inhabitants and first-time, understand the events that led caused the trauma. How do first-time visitors interact with the site in a manner that enables them to understand the consequences of the event?

As a young child I had the opportunity to visit a museum dedicated to the Titanic. The exhibition incorporated several features that allowed users to physically experience different aspects of the ship (including a replica of the grand staircase built from original blueprints) and the fatal night that claimed over 1500 lives. Visitors can place their hands against an iceberg made of real ice (see above) to understand the horrors of hypothermia. At the end of the experience, they come to a wall-mounted list of all the people on board; each ticket has been assigned a randomly-selected name and visitors can check to see if their person survived.⁹ Though this experience is honorable since the real Titanic can never be experienced, I believe a visitor's interaction with a site needs to be more genuine and derived from what currently exists.

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Locating

Two sites have been considered, each well-known for the catastrophes which have affected: the 30 km Exclusion Zone radiating from the Chernobyl Nuclear Power Plant and Fukushima Daiichi, Japan (a nuclear power plant that experienced multiple meltdowns as a result of the 2011 tsunamis). Both locations represent different cultures and time lines (the Chernobyl incident occurred 26 years ago), they demonstrate the fatal consequences of using nuclear technology to meet the needs of society.

A comparison of the responses following each incident was helpful in deciding upon the 30 km Exclusion Zone. The slow attempted recovery that followed the Chernobyl incident caused permanent physical and emotional scars in addition to those already inflicted immediately after the reactor exploded. Returning to the site would likely affirm the importance of memory to those involved. In contrast, the Fukushima Daiichi explosion proceeded with a quick re-population of the surrounding cities, demonstrating Japan's ability to quickly reestablish themselves and move on through encouraging an efficient recovery and likely devaluing the communal memory surrounding the event.

Positioning

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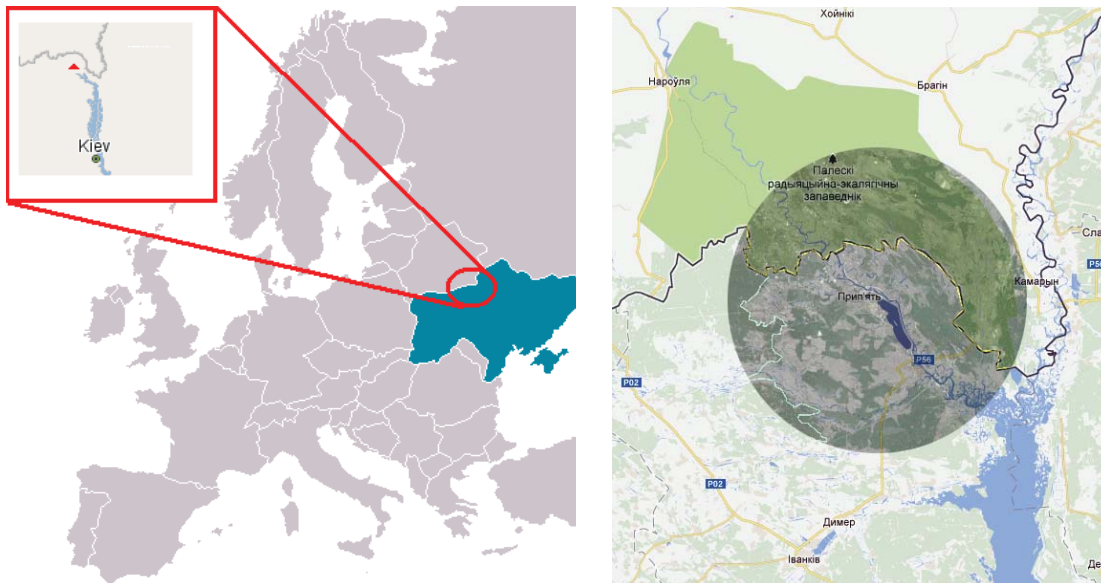


Figure 7: a) Location of Chernobyl Nuclear Power Plant; b) 30 km radius zone surrounding the Nuclear Power Plant

The 30 Kilometer Exclusion Zone

The 30 km Exclusion Zone, including Prip'yat and the surrounding villages, best sustain the inquiry's extreme emphasis on memory and necessity for emotional healing. The 26 years following the incident have allowed a long-term evolution of the victims and the site to occur, while elevating the role of memory within the survivors and the displaced generations.

Additionally, Prip'yat and the surrounding villages within the 30 km Exclusion zone radiating from the Chernobyl Power Plant support my intrigue with abandoned sites. Vladimir Shovkoshitny, a former employee at the power plant who volunteered during the attempted clean-up, refers to Prip'yat as "The City of Ghosts" within his poetry.¹⁰ Though the villages surrounding Prip'yat are still inhabited by a few hundred residents that insisted on returning, the city itself, once populated by nearly 50,000 people, has remained completely uninhabited, except for the occasional tourist group.

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A Thorough Understanding

To be fully immersed in the physical and emotional context in which the design will be established, I have analyzed several sources including newscasts, documentaries, interviews and personal recollections. These individual fragments, though inherently related, have allowed a greater understanding of the pain and trauma the project seeks to address. To activate the individual and collective memories inherent within the zone, the design must distill inspiration from historical knowledge as well as first hand accounts from the inhabitants and volunteers involved.

The following pages present crucial information surrounding the accident, beginning with an abbreviated synopsis of what actually caused the explosion. *Chernobyl Record* includes a first-hand recollection by Academician Valery Legasov that captures the varying perceptions of the authorities and the inhabitants of cities within the zone;¹¹ the lack of communication with those the residents trusted has led to an intense lack of trust within the psyche of those involved.

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Outline of Events Leading to Explosion of Reactor No. 4 ¹²

25 April, 1986

- 01:06__ Engineers begin a planned shutdown on Reactor No. 4 for maintenance. During the shut down, however, a number of safety procedures are bypassed in order to test a solution for providing energy in the event of an external power failure.
- 14:00__ The reactor's emergency core cooling system is disconnected.
- 23:10__ Reduction of power for the experiment continues.
- 00:28__ While the power was being lowered, the automatic control rods switch off. The engineer is unable to control the decrease of power, which can cause reactor poisoning by neutron absorbing components.
- 01:00__ Additional rods are intentionally removed to stabilize the power decrease, leading to a level of 200 megawatts, extremely insufficient for the experiment to continue; Chernobyl engineers decide to carry on.
- 01:03__ There is a large reduction in steam, and water level in steam drums drop below emergency levels.
- 01:19__ Engineers override the emergency alarm and keep the reactor working. Water in cooling circuit is near boiling point. All steam rods are withdrawn to maintain the 200-megawatt power level.
- 01:22__ Computers indicate an immediate shutdown of the reactor is required. Engineers are aware, but continue with experiment.
- 01:23__ The experiment begins. Water temperature increases and steam levels raise uncontrollably. A steep rise in power is noted. A full emergency shut down is ordered, but power levels continue to increase exponentially. Fuel channels explode in Reactor No. 4 due to reoccurring shocks.
- 01:24__ A huge explosion releases red hot nuclear fuel and graphite. Two thermal explosions occur, and spark fires in over thirty locations. One worker dies immediately after the explosion; a second worker is rushed to the hospital and dies shortly after receiving his diagnosis.

27 April__Evacuation of nearby town of Pripyat begins at 14:00

27 April- For the next fourteen days, crews of firemen and helicopter pilots attempt to extinguish the
10 May__ flames in what remained of the reactor central hall. Over 14,000 tons of solid material buried the radioactive material below.

28 April__Soviets release information regarding the damage that occurred to one of the atomic reactors.

5 May__Evacuation of 30 km zone is complete.

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Figure 8: Alternative Perceptions ¹³

Knowledge of Russian Authorities (recollected by academian Valery Legasov)

~12:00 hours after explosion



Driving through Chernobyl, Valery saw the inhabitants going about daily life.

~12:30 hours



As he drew closer to the reactor, the sky became darker, crimson in color.

~12:30 hours



The reactor was engulfed by flames, unyielding to the attempts of firefighters.

~18:00 hours



The remaining debris of Reactor 4 testified to the magnitude of the explosion.

Knowledge of Inhabitants of Pripjat and surrounding villages (approximately 116,000 people)

~12:00 hours after explosion



Hearing only a "light clapping" noise from the explosion, families in Pripjat went about their daily life, unaware of the toxic radiation surrounding them.

~36:00 hours



About 36 hours after the accident, residents were ordered to evacuate for a temporary period of approximately three days.

~38:00 hours



Within 3.5 hours, over 33,000 inhabitants were evacuated, taking only the essentials, unaware that most of them would never return.

~26 years



A wooden house within the 30 km exclusion zone stands today, plates on the table and an unmade bed testifying to the urgency of the evacuation.

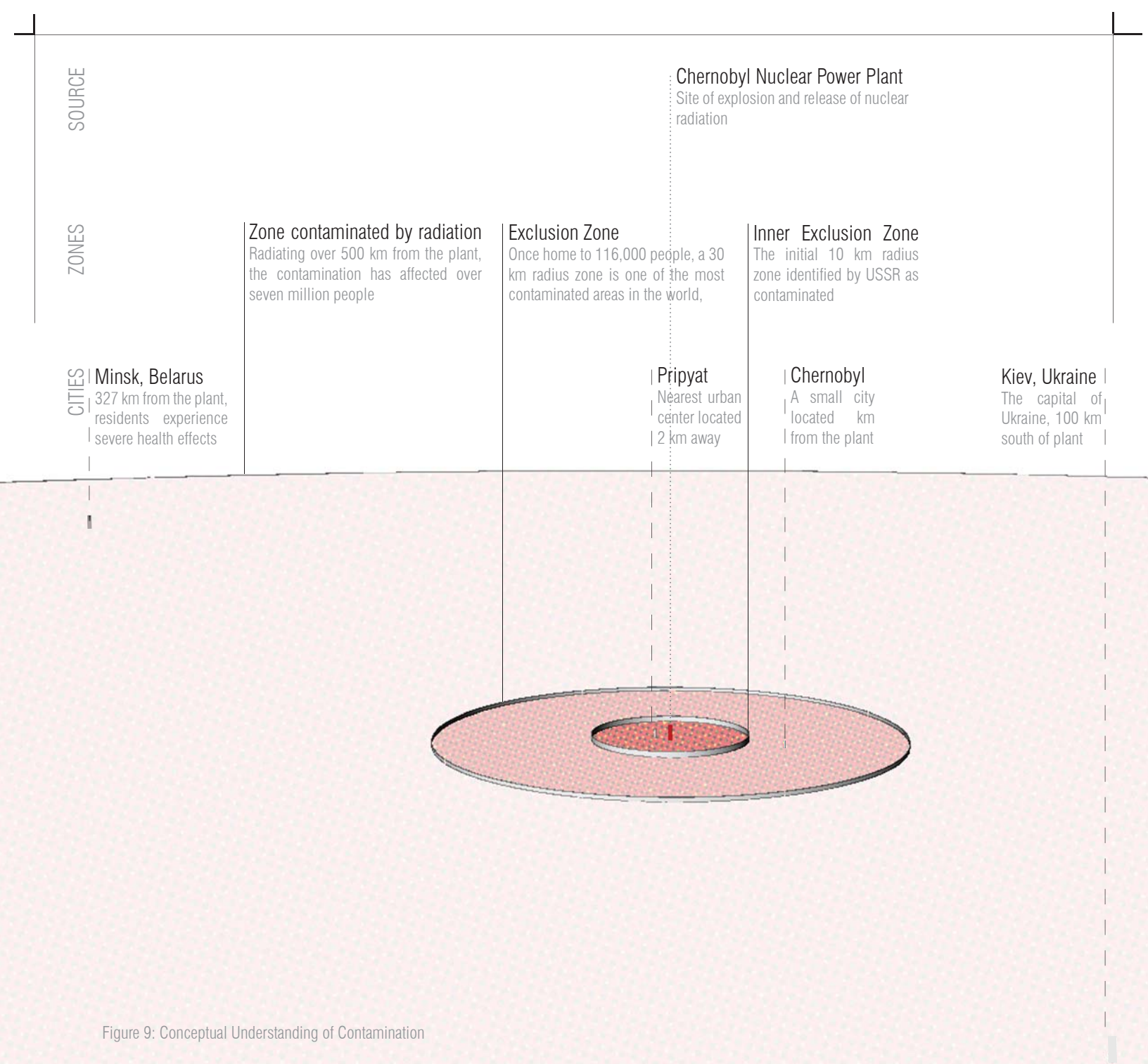


Figure 9: Conceptual Understanding of Contamination

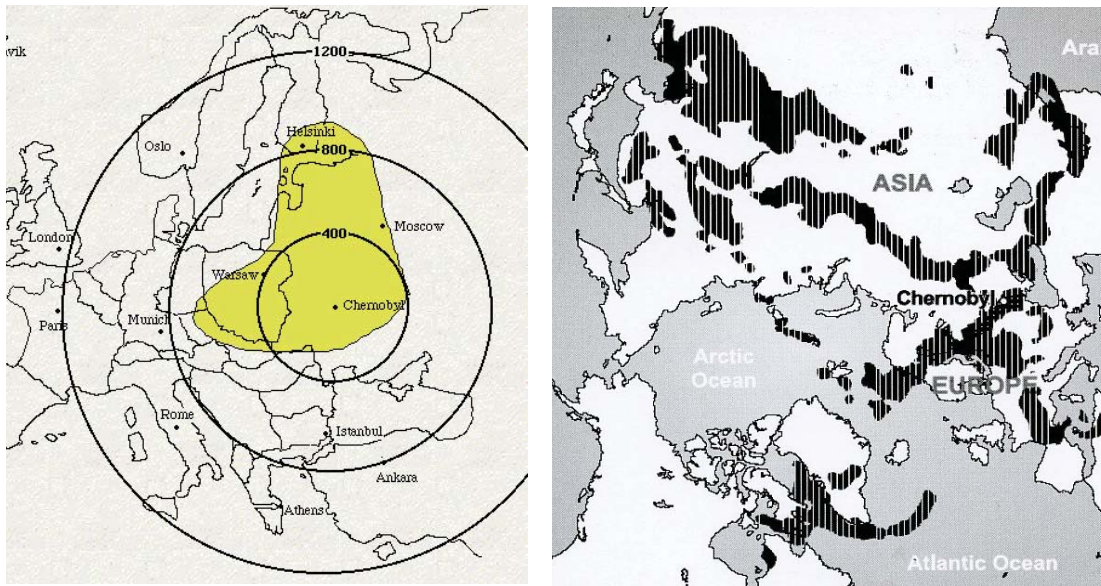


Figure 10: a) Radioactive Cloud; b) 1986 Map of Chernobyl Fall Out

The Contamination

An overall area of 146,300 km² (equivalent to 36.14 million acres) experienced ground contamination as a result of the nuclear explosion. Within only a few days, radioactive elements had absorbed into the soil, water, and sediments.¹⁴ On 28 April, a nuclear power station in Sweden, 130 km north of Stockholm, first detected the radioactive cloud outside of the Soviet Union borders.¹⁵ Surrounding forests were immediately contaminated by the fallout. Falling deciduous leaves “raised the radiation level of other objects in the environment and had to be removed, but definitely not burned.”¹⁶ Kiev, located over 60 km from the damaged reactor and considered to be “on the periphery of radiation fallout”, experienced radioactivity over 1,000 times higher than the normal background measure even 15 days after the accident.¹⁷

The northwestern winds were responsible for pushing the radioactive cloud over much of Europe and Asia. Entire livelihoods changed overnight as people were forbidden to fish in lakes; precious water sources that maintained the republics’ agricultural wealth had to be cut off and supplied from other rivers.¹⁸ In many cases outside of the Exclusion zone, radiation levels returned to normal within a few months. Unfortunately, hundreds of thousands of people are still suffering from their brief exposure.

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The Past Inhabitant



The Hero



The Returnee



The Outsider



The Tourist

Figure 11: The Five Identified Groups

Those Affected by the Chernobyl Explosion

The radiation contamination released after the explosion of Reactor Number Four affected an innumerable amount of people. To be fully aware of those who suffered from the aftermath of the accident, five groups have been identified: *The Past Inhabitant*, *The Hero*, *The Returnee*, *The Outsider*, and *The Tourist*. While differing in terms of the severity with which they were affected, each individual's life will never be the same.

Acknowledging that an individual's contemporary experience within the Zone is inherently derived from their personal association with the accident, it would be nearly impossible to customize a design for each user. Additionally, the inquiry seeks to evoke the personal memories of each visitor, not to expose them to a prescribed emotional response.

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Those Affected

As time passes, the number of people who experienced the event first-hand will continue to decrease.

Figure 12: An Evolution



Educational Visits

will continue to increase; Within the past few years, the amounts of visitors increased from a few thousand a year to over 10,000 in 2010.

Progression of Time

It is important to acknowledge that as time passes, the number of victims who experienced the disaster first-hand is continuing to decline. Based on the average lifespan of approximately 70 years, there is a period remaining of about 45 years until the majority of those directly involved will begin passing away.

In contrast to this inevitable trend, an increasing interest among tourists seems to promise that the Exclusion Zone will be anything but forgotten. By visiting the nuclear power plant and the surrounding cities, people are able to comprehend the scale of damage which resulted from the explosion.

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Figure 13: Past Inhabitants of the Exclusion Zone

The Past Inhabitant

It was paradise on earth, we had a river, nearby woods nearby, multitudes of children all around all young. There were many flowers. It was so beautiful.¹⁹

Nadiya Makarevych

Approximately 116,000 residents within the Exclusion Zone were forced to evacuate their homes and city in the days following the explosion. Uninformed about the catastrophic level of contamination, they believed they would be returning within a few days; thus, they left behind almost all of their personal belongings and animals. Little did they know that most of them would never again return to their homes, and that their animals, including valuable farm stock, would be shot to prevent the spread of radioactive elements.

Nadiya Makarevych (top right picture) recollected life in Pripjat prior to the accident; she and her husband, along with their two children, lived happily in one of the city's many apartments. They are some of the few who have since returned to Pripjat to see their home, the schools in which their children were enrolled, and the hospital in which Nadiya gave birth to her children.

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Figure 14: Heros: Past and Present

The Hero

More than 600,000 workers and volunteers dedicated efforts to retain the contamination within the proximity of the reactor and to prevent larger explosions from occurring that would have rendered all of Europe uninhabitable. Thirty-one of these men died of radiation poisoning within a few weeks, however hundreds of thousands of people involved with the cleanup operation have continued to experience health issues resulting from the exposure to amounts of radiation hundreds of times beyond the recommended levels. In the months following the explosion, liquidators (lower left image) were tasked with decontaminating the surrounding buildings and landscapes by dousing everything with a decontamination fluid; in some cases, they had to completely bury entire structures and contaminated trees to prevent further spread. Their attempts have received very little recognition, though thousands of them have suffered terribly for their sacrifice.

Currently, workers continue to strengthen the existing Sarcophagus, and must wear extensive protection, as demonstrated by the image on the right. Since they are working within the concrete shell, they are only allowed 15 minutes a day within the zone to limit their exposure to the heavy amounts of radiation that remain active.²⁰

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Figure 15: Elderly Women Living Within the Exclusion Zone

The Returnee

Within a few months after the explosion, nearly 1,000 residents of the surrounding villages illegally returned to their homes, aware of the negative consequences of radiation exposure. Though children were not allowed to return, these survivors' were driven by their deep memories and association to their homes to sacrifice their health.

According to reports by the United Nations Development Programme and the United Nations Children's Fund, many of those who were relocated after the accident now suffer from anxiety, depression and disrupted social networks, the traumas of displaced people everywhere. The World Health Organization now considers the psychological impact to be at least as detrimental as the physical. Being depressed and unmotivated, pursuing an unhealthy lifestyle and clinging to a victim mind-set, it has proved to be the worst fall-out for the 'Chernobylites'.²¹

When questioned by visitors within her village, an elderly returnee admitted "starvation is what scares me. Not radiation." The interviewer concluded most returnees believe " 'if you leave, you die'. They would rather risk exposure to radiation than the soul-crushing prospect of being separated from their homes and land. 'You can't take me from my mother; you can't take me from my motherland. Motherland is motherland.'"²²

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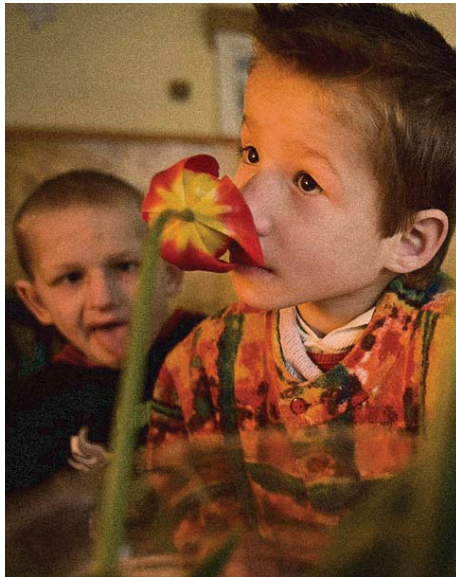


Figure 16: Orphans in Belarus

The Affected Outside of Zone

Is it okay for me to photograph?

YES I want everyone to see what they have done! ²³

This dialogue occurred in 2000 between a photographer and the mother of 17-year-old Aleysa, who received contamination at age three while playing in "the black rains of Chernobyl." At the time of this conversation, Aleysa lay in a fatal coma after 14 years of suffering and constant therapy.

Though the evacuation of the Exclusion Zone displaced over one hundred thousand residents, an even larger amount of people were affected outside of the zone. According to the UN, seven million people have been affected; half of those are children.²⁴ These young people received contamination from several sources including wind and rain and from drinking milk produced by animals exposed to contaminated food sources. Though the event occurred 26 years ago, children are still being born with significant physical deformities. Expecting mothers are often afraid their children will suffer from lifelong diseases and malfunctions, and thus abortions have become much more frequent since the accident.

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Figure 17: Why Have They Come?

The Tourist

*The atmosphere in Pripjat is truly unique – very quiet, very sad, you can almost hear your own thoughts. In every other place of the world each building would be a one day exploration on its own. But Pripjat is so much more. It's not just abandoned buildings, it's history. It's not an investor running out of money, it's not a movie set – it's the real thing.*²⁵

While many people may not have been personally affected by the disaster, they are compelled to Chernobyl, Pripjat, and other areas within the 30 km zone to witness the effects of the accident. Tourists are now the temporary occupants of Pripjat, breathing life into it for short segments of time, appreciating the remainder of the city's infrastructure that once hosted nearly 50,000 inhabitants. Some of the villages within the zone are occasionally visited by missionaries and researchers adamant to interact with those who returned to their homeland, providing returnees with a link to the world outside of their zone.

Dark Tourism, visiting places associated with trauma and suffering, has increased within the last decade. Diller Scofidio investigate war and tourism and “propose an analysis that makes evident the role of rituals and institutions in the fabrication of our past, and in the ever-evolving construction of ‘our national narratives’”.²⁶

Positioning

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Figure 18: Fragments of a life left behind: a) Pripyat Ferris Wheel: b) Personal Belongings

The Aftermath

The deserted buildings and landscapes are extremely evocative and testify to the urgency with which the residents abandoned the city. An amusement park that was scheduled to open only days after the disaster has been inhabited only by rust, decay, and avid photographers. Nature is reclaiming the territory; trees now occupy the Central Stadium's field. Though radiation levels are dropping, the city is fading into a dream, memories of joy and happiness being replaced with fragments of a city destroyed by the ambitions of humanity.

Several of the inhabitants that experienced the incident first-hand have passed away due to the exposure to lethal radiation during the 36 hours that followed the explosion, a period during which no information of the tragedy was released. Children from 1986 recollect their experiences, often revealing the loss of a close friend or testifying to the deformities that plague present and future generations. The need for emotional healing and restoration is appropriate for several of the people affected by the incident including the evacuees of Pripyat and other villages, the volunteers who (sometimes unknowingly) risked their lives attempting to prevent further damage, and those beyond the zone whose lives would never be the same after 26 April, 1986.

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“But one has to live”

*This is how we live.
The body is heavier and heavier.
the spirit is subtler and narrower.
It can enter the deserted house;
it circles like a bird above Pripyat in the night...
and you often wish that it would leave the inept body
and not days but years flow away
and numberless are the losses.
But one has to live,
and for the sake of the children,
accumulate anger,
to efface the old age in children's eyes
with the hope for a cure.*

Lyubov Sirota ²⁷



Figure 19 Engraving from Soviet magazine *Youth*, 1987

Expression of Anguish, Expression of Hope

Throughout my research I have discovered that many evacuees have expressed their anguish towards the catastrophe through art forms including film, poetry, graffiti (see next page), and painting; this body of collective work often reflects the pain experienced during the trauma. It seems appropriate for the design to offer spaces, both temporary and long-term (not to exceed the recommended exposure to radiation, depending on the proximity to the Sarcophagus) that encourage creativity and expression. Through the production of such work, those who experienced the tragedy first-hand ensure their stories and memories will be heard and remembered.

Lyubov Sirota, a past inhabitant of Prip'yat, recalls the happy days filled with sunshine and laughter before the accident occurred. She uses poetry to “entrust her soul to other people. She believes that people will carry on this burden and help her, as she herself is ready to help everyone who lives on earth” ²⁸. Her work transforms her painful memories into an evocative, constructive art that reveals the consequences of the event, allowing the trauma it instilled to be introduced to audiences around the world.

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Crafting

Forming

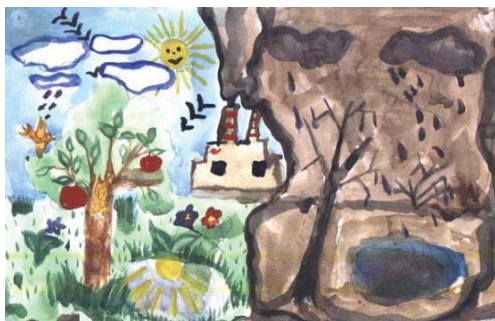


Figure 20: Graffiti and art in response to Chernobyl

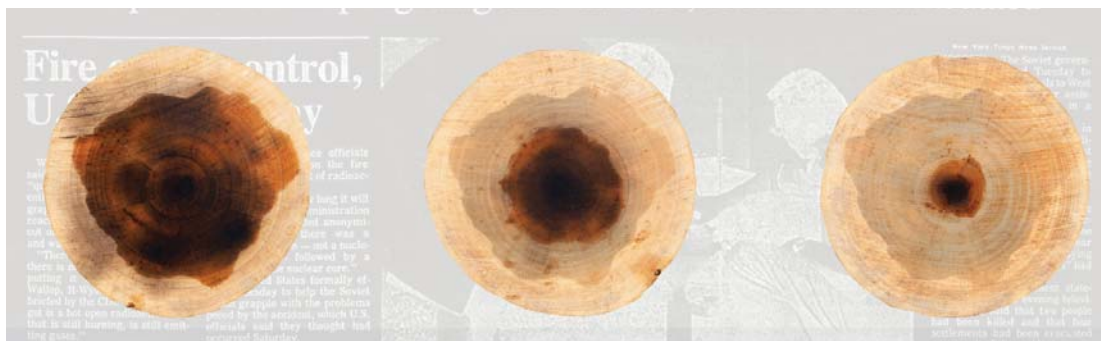


Figure 21: Nature reclaiming the wounds of mankind: a) burning wooden rings: b) overgrown vegetation



Reclamation

Today, as radiation levels continue to drop, it is clear that nature has been reclaiming the deserted territory. It seems as if nature is announcing the cleansing which has occurred, beckoning humans back to repopulate the zones. City centers, once highly manicured, are inhabited by young seedlings that quickly grow towards the sun; Pripjat's Central Stadium has transformed from maintained turf to a small forest of natural trees.

In addition to being overtaken by vegetation, the zone has become an area of wildlife refuge that hosts several rare species of plants and animals, many of which had been considered close to extinction.

What Man had abandoned, nature now embraced to create a remarkable and self-made heaven... remarkably, Nature has licked its wounds and fought back to reclaim this place.²⁹

Chernobyl - Life in the Dead Zone
Animal Planet

Positioning

Framing

Crafting

Forming



The Past Inhabitant



The Hero



The Outsider



The Tourist



The Returnee

Figure 22

The Visitor

The Resident

The Proposal

While the previously discussed groups were affected, there are two broad categories of people: the visitor and the resident. While the visitors' intentions for traveling within the Exclusion Zone differ greatly (to temporarily revisit home, to view the Sarcophagus, etc.), their interaction with the zone is characterized by its ephemeral nature. Those displaced by the accident suffer from psychological impacts and have, due to a victim mind set, generally anticipate a shorter life expectancy. Although claiming to be worried about their health, they exercise poor diet and escapism through alcohol and tobacco use.

The memories and experiences of the residents are extremely important as they are the remaining stories of life and happiness within the zone. Unfortunately, a large percentage of them lack proper diet and health precautions due to their inherent isolation.

While an intervention is required to steward the health of both groups, a greater endeavor is to preserve their memories and evoke emotional healing through properly reaffirming their value and role within their society, their community, their families, and themselves.

Positioning

Framing

Crafting

Forming



THE EXPERIENTIAL MEMORIAL: A beneficial exchange with the permanent residents within the zone.



THE TRADITIONAL MEMORIAL: An engagement with iconic locations within the zone.

Figure 23: Two Forms of Memorial

The Program: A Community Center

Feelings of “hopelessness and helplessness”³⁰ have been expressed by evacuees since the accident occurred. Following the dissolution of the Soviet Union, they were denied continued governmental support to sustain their new livelihoods. A heavy percentage of them lost hope for a successful future, and continue to feel unable to trust anyone. To counteract these feelings and initiate a progression towards recovery, it is crucial to involve the visitor and the resident in a process of revitalization and personal reclamation of individual and cultural identity and worth.

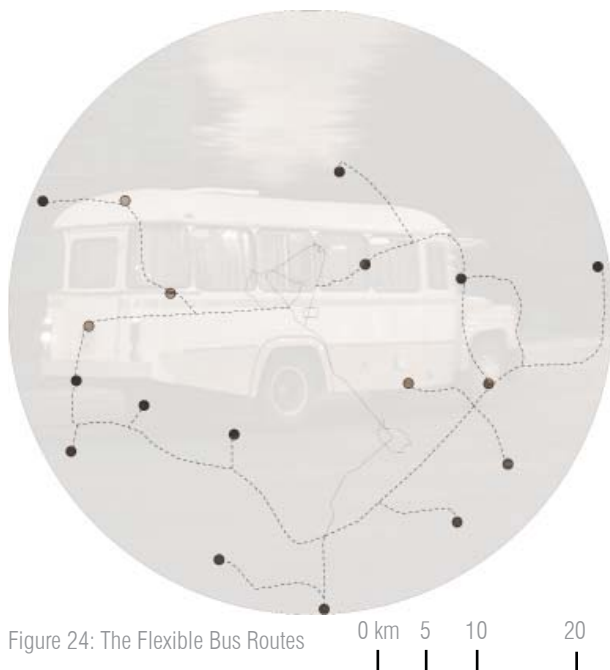
A community center re-establishes the significance of interaction as a means for communal healing. The building will be located at the entry to the zone, marking the perceived threshold between the clean and the unclean. One of the main objectives of the center is to address the constant worry of starvation experienced by the residents within the zone; this will be accomplished through a series of spaces and rituals that encourage a mutually beneficial exchange between visitors and residents. The intent is to help the physical needs of the residents and allow their stories and memories to be exchanged with the visitor’s, later to be recorded in an archive. Another objective engages visitors with the existing memorials within the zone, each location specific, for those who desire to tour the zone rather than help the residents.

Positioning

Framing

Crafting

Forming



~ 25 years

Within a few decades, all of the elderly residents will have passed away, their homes become memorials visited by friends made in connection with the center.

.....2012

As food is distributed to the residents, stories are shared, friends are made.



The Village Experience

Addressing the hunger problems faced by residents, a journey promotes visitors to venture to sparsely occupied villages and distribute food to elderly residents. Through this act of courage, visitors are encouraged to transcend the victim mind set and identify themselves as survivors and heros.

A bus system provides an everyday service that connects residents within the zone to the community center and the world outside of the zone. This allows distributors to interact with the residents within the everyday environment of their homes, providing the opportunity to witness the primitive livelihoods of the residents and to converse in a less prescriptive manner than would occur at the center. Stories are shared, memories evoked, and healing begins. After spending time with the residents, visitors return to the center and archive information about each occupant. As time progresses, the archiving will produce a record of those living within the zone, allowing the story of each individual to be documented and secured.

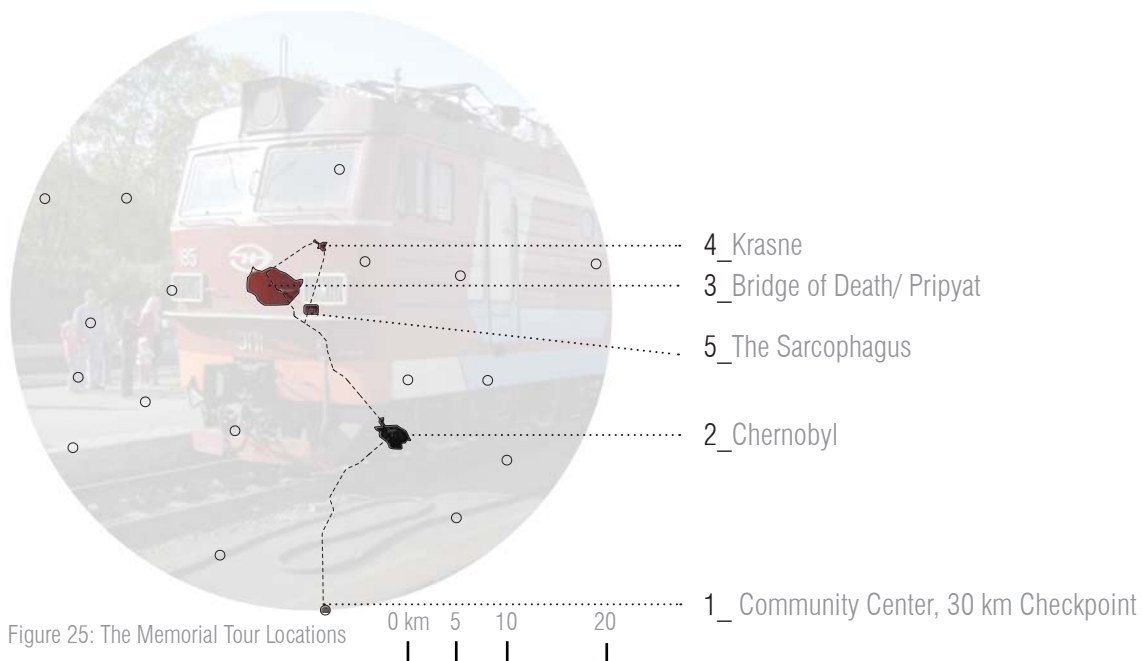
In time, as the elderly residents pass away, their homes will remain as memorials. Those who visited the now deceased residents will be able to bring visitors to these houses and share the stories they learned while distributing health and healing. The archives provide a permanent testimony of the bravery and dedication of those who sacrificed health to return to their homeland.

Positioning

Framing

Crafting

Forming



A Memorial Tour

Though the proposal is rich in reconnecting the isolated residents to a larger network of those affected, it is important to acknowledge that every visitor may not be interested in assisting the residents, but rather in viewing key sites within the zone. For this reason, a memorial tour has been established that links five iconic locations within the zone via a train. Heavily used before the nuclear accident and serving as a means of evacuation afterwards, the train is extremely symbolic. Small platforms mark each stop along the journey and encourage interaction among participants.

The map above shows the five locations included within the experience, beginning with the 30 km checkpoint (location of the community center), then connecting to the small town of Chernobyl, the iconic ghost town of Pripyat, a small abandoned village known as Krasne, and then culminating at the Sarcophagus. Each location provides opportunity for visitors to witness the various scales of places affected by the explosion. Existing memorials at Chernobyl and the Sarcophagus recognize those affected by the event, and signify highlights of the journey for the typical visitor. In contrast to the everyday function of the bus system, this experience is ritualistic and occurs on a set interval.

Positioning

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Figure 26: The Existing 30 km Checkpoint

Location 1_ Community Center, 30 km Checkpoint

Entrance into the Exclusion Zone currently requires being admitted through a checkpoint located at the 30 km marker. The Community Center would be located here, acting as the physical threshold into the zone, a space of interaction between those within and those outside of the barrier.

This is an extremely important portion of the journey, as it marks the perceived barrier between the clean and the contaminated. Visitors will likely experience a bit of anxiety as they commit to entering the Exclusion Zone. Those who are returning for a temporary visit home might be filled with anticipation, acknowledging they are so close to the place they once called home.

We pull up to the eerie security checkpoint at the “Zone of Alienation,” the 30-kilometer Exclusion Zone of contaminated land surrounding the power plant. Before we’re permitted to proceed, military guards confirm our identity. They give us a once-over; no bare skin allowed around the site’s continuously leaking radiation.

We sign lengthy waivers. We listen to the rules: no eating, drinking or smoking outdoors. Don’t step off the path or touch any vegetation. Cameras and bags must never touch the ground. ³¹

Positioning

Framing

Crafting

Forming



Monument to the Chernobyl Liquidators



Chernobyl Entrance

Figure 27: Chernobyl



Location 2_Chernobyl

Though the infamous disaster is referred to with the name Chernobyl, the actual city of Chernobyl lies approximately 15 km southeast of the Chernobyl Nuclear Power Plant. The radiation cloud released from the plant traveled northwest, and preventing high contamination levels within the city (in comparison with Pripyat). A few buildings still operate within this small town, including a hotel and a restaurant that prepares food gathered outside of the zone. The owners and staff of these facilities have to work within the zone for a carefully monitored duration of time and then return to non-contaminated areas.

Significant places within this zone relevant to visitors include the well known Chernobyl entrance sign and the Monument to the Chernobyl Liquidators (a name given to the over 600,000 individuals who participated in the clean up efforts in areas surrounding Reactor Number Four).

Positioning

Framing

Crafting

Forming



Yaniv Railway Station



Figure 28: The Bridge of Death



View of Chernobyl Power Plant from Bridge

Location 3_The Bridge of Death

No warnings were given about radiation or fallout, and many gathered on a railroad bridge, now called the “Bridge of Death,” where they could get a good view of the plant. Here they received doses of radiation in excess of 500 roentgens per hour, and for many this would prove lethal. ³²

In the hours following the explosion, northwestern winds directed the radioactive cloud towards Pripyat, hosting a pre-accident population of nearly 50,000 inhabitants. Several children and adults, curious to see the fire blazing from the power plant, stood on a railroad bridge, now referred to as The Bridge of Death, and quickly fell ill. The Yaniv Railway Station, connecting to the tracks lying under the bridge, was the final departure point for several of Pripyat’s residents. It now stands abandoned, its train cars dispersed along the derelict tracks.

As the threshold to the axial boulevard that leads towards Pripyat’s center, the bridge offers a powerful gesture of welcome and grief. The Sarcophagus is still visible from the bridge, allowing visitors to gaze at the concrete tomb from afar. This will be an emotionally difficult portion of journey, standing in the place where curious inhabitants received high radiation exposure as a result of their curiosity.

Positioning

Framing

Crafting

Forming



Figure 29: Pripjat, The Ghost Town 2 km from the Power Plant

Location 3_Pripjat

Pripjat was well-known for the 33,000 rose plants and 250,000 shrubs that adorned the streets and public plazas (see upper right-hand image). Unfortunately, Pripjat's close proximity of two kilometers to the Chernobyl Nuclear Power Plant subjected it to extremely high levels of radiation. The city's evacuation following the explosion left the well tended gardens to be overgrown by weeds and saplings. Though attesting to the passing of time and lack of maintenance, several buildings within the city have become iconic among visitors including the Amusement Park, the Palace of Culture (still displaying artifacts of the Soviet Era) and the entrance sign celebrating the city's founding in 1970.

This portion of the journey will likely be filled with several emotions, unique for each user and dependent upon their affiliation with the city. For those returning to the city they called home, this is the moment within the journey where they come face to face with their past.

Positioning

Framing

Crafting

Forming



St. Michael's Church



Abandoned home

Figure 30: Krasne

Location 5_Krasne (abandoned village)

The small, almost entirely abandoned village of Krasne- seven kilometers north of the Chernobyl Nuclear Power Plant- displays the affects of the catastrophe on a location much smaller than Pripyat. Though few residents still inhabit the village, it has mostly become overgrown by nature and time. However, St. Michael's Church has remained entirely intact and displays magnificent murals. It is said that the village's few inhabitants congregate in this sacred space on certain occasions.

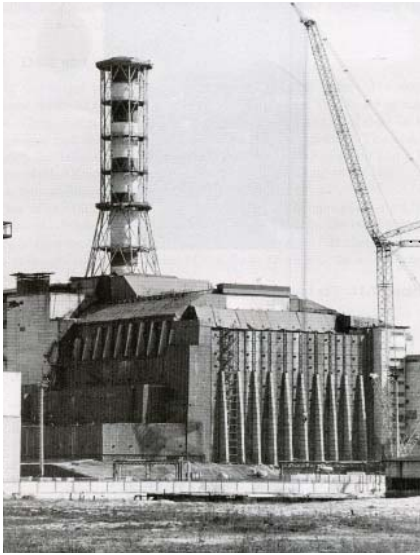
While this location offers a valuable opportunity for visitors to experience the rural conditions within the Exclusion Zone, homage and respect must be considered for those living within this village. Though an interaction between visitor and returnee would be very powerful, and is encouraged, the design cannot subject current inhabitants to a high level of stress, discomfort, or a feeling of displacement.

Positioning

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Reactor No. 4

Figure 31: The Epicenter



Location 6_The Sarcophagus

The visitor's journey culminates at the most critical piece within the Exclusion Zone, the epicenter: the Sarcophagus. As the physical origin and source of contamination, it will be an unforgettable experience for visitors to witness first-hand. Though visitors are not allowed inside of the concrete shell, its overshadowing form constructed of precast concrete elements attest to its magnitude.

Within the last several years, the current concrete shell has slowly been forming small cracks that will eventually release the potent radiation harvesting within. Engineers of the design admitted it was only the first solution to the problem that would serve the current generation and that future generations would have to more thoroughly address the problem. Currently, enormous steel arches are being constructed adjacent to the reactor; in time they will be positioned over the Sarcophagus and completely sealed. Dismantling of the destroyed reactor and its cracking concrete shell will then commence.

Positioning

Framing

Crafting

Forming

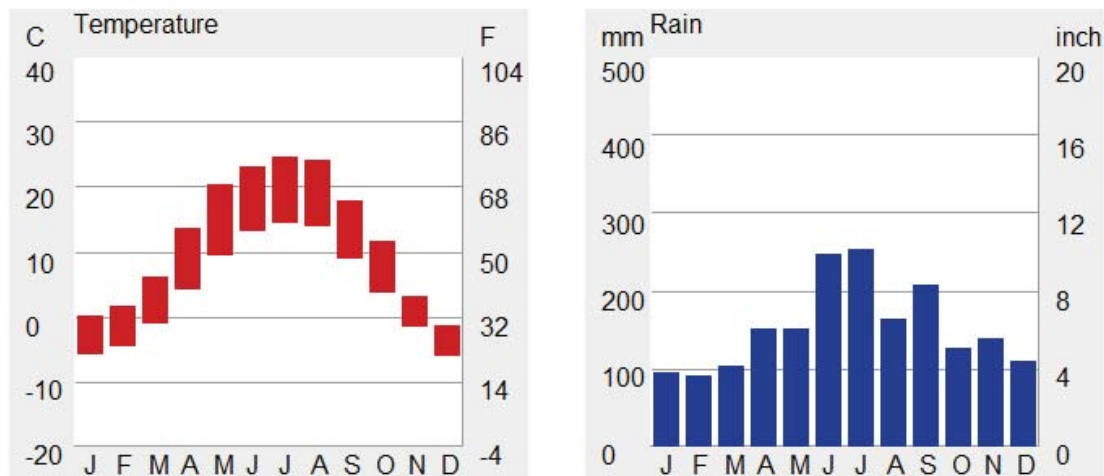


Figure 32: Monthly Temperature and Rainfall near Chernobyl

Understanding the Climate

In order to design the most functional and efficient building, it is crucial to understand physical forces including temperature and rain (see chart above). Though the five locations comprising the Memorial Tour are separated by a considerable distance, the climate conditions remain rather homogeneous.

With a high temperature of approximately 72-74 degrees Fahrenheit during the months of June and July, the Exclusion Zone has relatively decent temperatures until the middle of winter. The high volume of rainwater that hydrates the area evokes thoughts of purification and cleansing, as well as providing nourishment to the land. There is the potential for the community center to harvest the rainwater to demonstrate environmental stewardship.

Important elements within the design, chiefly the communal vegetable and flower gardens, benefit greatly from the moderate temperatures and abundant rainfall found within this location.

Positioning
Framing
Crafting
Forming

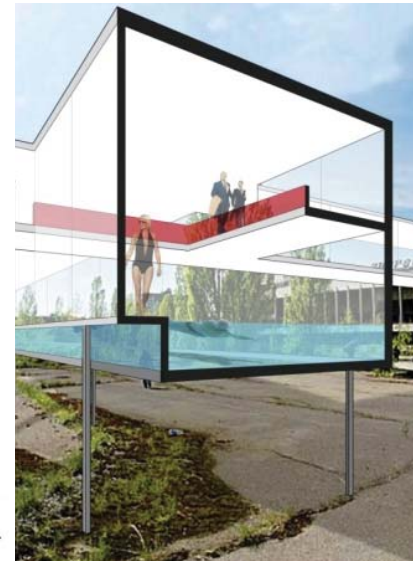
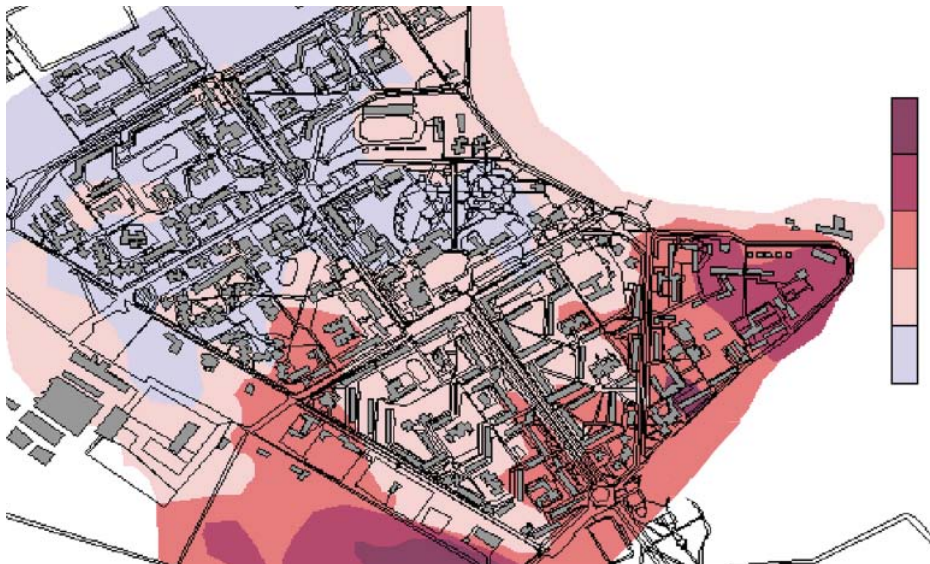


Figure 33: a) Radiation levels within Pripjat in 1998_ the darker hues indicate higher levels
b) Rendering of proposed floating Chernobyl Visitor Center by Matthew Frommer

How do visitors physically interact with the 30 km Zone?

While portions of the 30 km zone have low enough radiation that visitors can walk about freely, there must be consideration given to the fact that many will be apprehensive to contact these surfaces. A design for a Chernobyl Visitor Center, by Matthew Frommer creates an architecture fully suspending visitors off of the previously contaminated surfaces.

I believe the connection between person and site should be more intimate, to physically interact with the abandoned buildings and landscapes. It seems only through this personal interaction can one summon the emotions to trigger pain and empathy, and thus to heal. To ensure safety, however, geigers (instruments that measure radiation) will be used to notify visitors when they enter highly radioactive zones.

*Out-of-date artifacts.. held sway over a spectator's subconscious and inhibited anything new from occurring. By placing these objects in unique contexts and configurations, they became a form of "shock experience" used to reawaken memory. They enabled the spectator to...achieve a critical awareness of the present.*³³

Christine Boyer

The City of Collective Memory: Its Historical Imagery and Architectural Entertainments

Positioning

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Figure 34: Film Strips Within Pripyat's Palace of Culture

Does film make it possible for you to remember in "real time and motion" something you never saw? But is viewing past film, then, an act of fresh witnessing, as distinct from remembering? ³⁴

James F. Moyer

Filmic Construction

When constructing the artifact for the Kitty Hart quote (page 2), I became interested in the notion of cinema and the strong associations it has with collective memory. My intention of evoking fragments of memory and layering them with a contemporary interaction of the site suggests a filmic approach to the design. There is a strong similarity between the necessary splicing together of fragments to produce a film and the recombination or montaging of memories one might experience.

I am fascinated by the inherent darkness necessary for film to be seen, and question the emotional effect this moment of visual silence may have on a person revisiting their past. Within this proposal, a thorough investigation of light's effects, both in its presence and absence, will be undertaken to create evocative experiences. When elements are well lit, their exposure evokes a more prescriptive way of seeing and feeling. In contrast, when light levels are low, visitors are encouraged to reflect and think. This careful and intentional use of lighting conditions will address the architectural response appropriate to each situation within the journey.

Positioning

Framing

Crafting

Forming

A Journey of Healing

The experience within the zone is meant to evoke the three phases of healing. While the architecture of the Community Center is able to contribute elements specific to each phase, the Village Experience and the Memorial Tour are intended to evoke these moments in a less prescriptive and formalized manner.

The following pages include preliminary sketches concerning how architecture may begin to evoke the particular phases of the healing process.

Positioning

Framing

Crafting

Forming



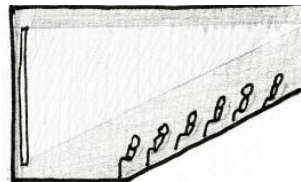
Exposure:



Collectively experiencing places within the zone first-hand

To recognize the distress surrounding the events that followed 26 April 1986, an educational experience can expose visitors to the consequences of the accident. The architecture responds appropriately to the context and provides both interior and exterior spaces to maximize the visitor's experience and understanding. Film may be projected to allow users the opportunity to visually witness recorded moments of the past, while a physical interaction with the surrounding landscape will encourage visitors to engage with the site.

There will be moments of collective exposure and individual exposure, acknowledging that intense emotions may result.



Experiencing through film



Individual Exposure

Positioning

Framing

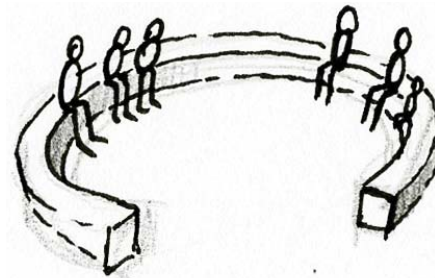
Crafting

Forming

Expression/ Reflection

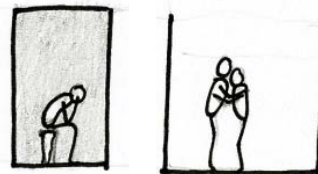
Bearing witness to tales that need to be told, even though the narrator re-experiences pain in the telling, is a way for individuals and communities to get past trauma: to acknowledge it and begin to heal.

People need to tell the story and can tell the story, no matter how bad it is. ³⁵

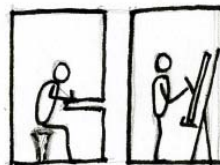


Verbal Expression

After learning (potentially also remembering) about the aftermath of the explosion, a series of spaces encourage users to express their emotions through modes including verbal communication with other visitors (a communal discussion area), an artistic recording of their thoughts (poetry, painting studios) or a physical expression of their distress (crying, shouting within a private space). The opportunity for interaction among visitors is vital to allow a person's burdens to be released, shared, and comforted.



Physical Expression



Artistic Expression

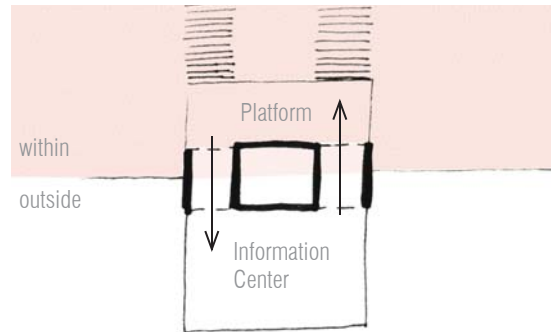
Positioning

Framing

Crafting

Forming

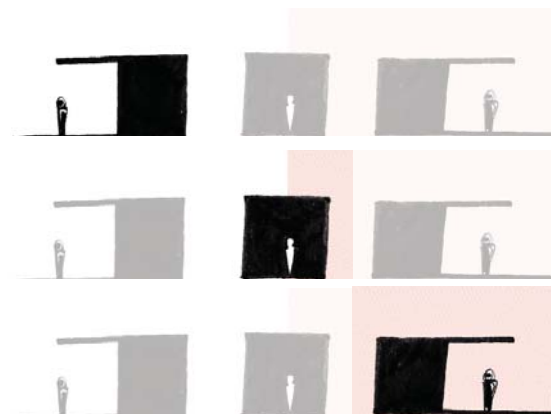
Community Center at 30 km Checkpoint



Preliminary diagram of threshold condition

Initial sketches of the Community Center focus on its crucial role as threshold and gateway connecting the Exclusion Zone to the clean realm encompassing it.

The architecture has the potential to momentarily surround a user as they enter the Zone, potentially a moment of disorientation, thus resulting in a prolonged, memorable experience.



The threshold between clean and contaminated

Positioning

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Program List

Community Center:

Flower + Vegetable Gardens	3,000 SF
Exhibition Space	2,000 SF
Public Forum	2,000 SF
Archive	1,000 SF
Large Dining Hall	1,000 SF
Small Meeting Spaces	3 x 200 = 600 SF
Kitchen	1,000 SF
Service	SF TBD

Residents' Houses Acquired through time

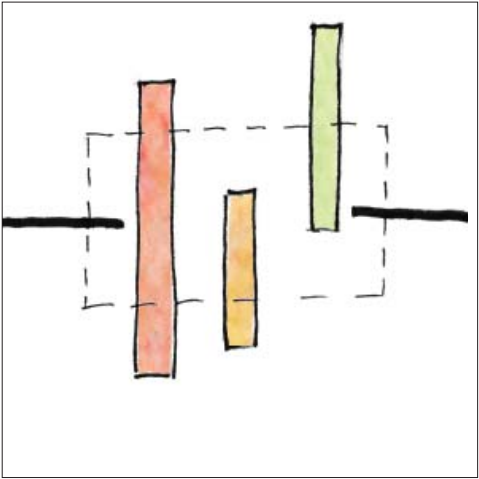
Train Platforms SF TBD

Bus Stations SF TBD

Flower + Vegetable Gardens3,000 SF

The gardens welcome all to the center and acknowledge the significance role that agriculture and horticulture held prior to the accident. They offer safe plots of land which can contribute produce to the community center, while also providing places to grow flowers which can be picked upon entering and delivered within the zone.

To address the movement into the Exclusion Zone, the planters blur a clear delineation by pushing and pulling along the axis of travel, reflecting the desire to break the victim mind set.

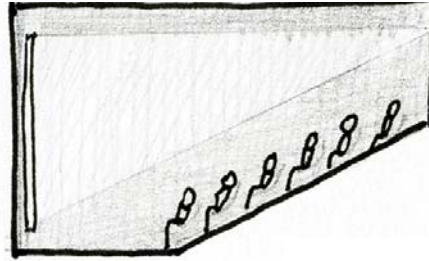


Positioning
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Exhibition Space.....2,000 SF

This flexible space provides an introductory educational experience for those unfamiliar with the accident, as well as for the curious visitor who is unwilling to enter the zone. The large amount of raw film that exists from the time surrounding the accident will be showcased, a reminder of the life within the zone before its evacuation.

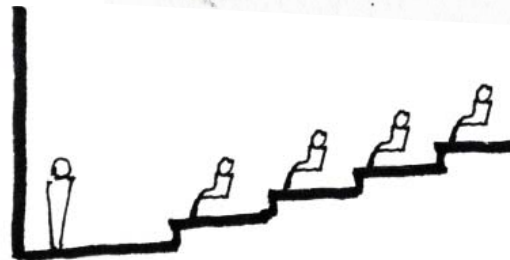
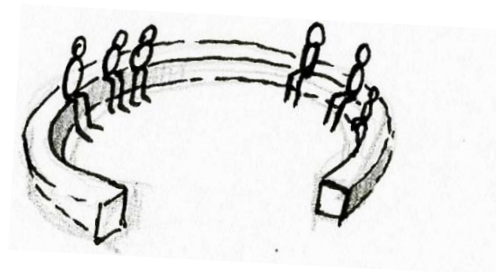
Temporary galleries exhibit work produced by local artists and craftsmen, allowing their creative work to be viewed by hundreds of visitors.



Public Forum.....2,000 SF

This space accommodates large gatherings, encouraging visitors to express their thoughts, emotions and memories towards the accident. By providing a public forum, users are encouraged to regain confidence of their value and ability to contribute to the environment around them.

Orientations regarding safety within the zone will be held within this space, ensuring all visitors are aware of the appropriate behavior and precautions required to minimize radiation exposure.



Positioning

Framing

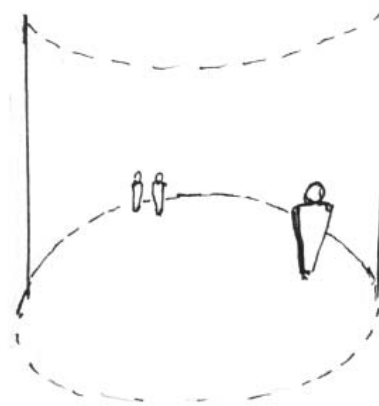
Crafting

Forming

Archive..... 1,000 SF

After delivering food and spending time with residents within the zone, visitors are encouraged to record what they experienced and learned, both about the resident and other fascinating discoveries, to document the existing conditions within the zone.

The space will create an immersive experience for visitors, allowing them to feel encompassed by its colorful walls clothed in stories and memories. As time progresses, a mapping of the residents will evolve and serve as a census that marks their presence. Within a few decades, the elderly residents will all have passed away, but their stories will always live on through the archive.



Large Dining Hall..... 1,000 SF

Significant occasions throughout the year are marked by hosting the meals at the center rather than distributing them among the villages. Residents within the zone are encouraged to participate and temporarily step outside of their everyday realm and connect to the larger group of people affected by the disaster.

Through the everyday ritual of eating and fellowship, the stories of each individual are brought forth and shared. Regardless of his association with the disaster, each participant plays an essential role in communal expression and healing.

Positioning

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Small Meeting Spaces 3 x 200 = 600 SF

Acknowledging that some people might be uncomfortable in a large group setting (particularly villagers who are accustomed to an isolated lifestyle), they spaces are scaled for approximately 3-5 people and encourage a meal or conversation to occur on a much more intimate level.

Kitchen..... 1,000 SF

A place where visitors are taught to prepare healthy meals, attempting to contribute to a healthier lifestyle of those affected. There is the potential for residents from the zone to lead small classes and teach traditional methods of cooking.

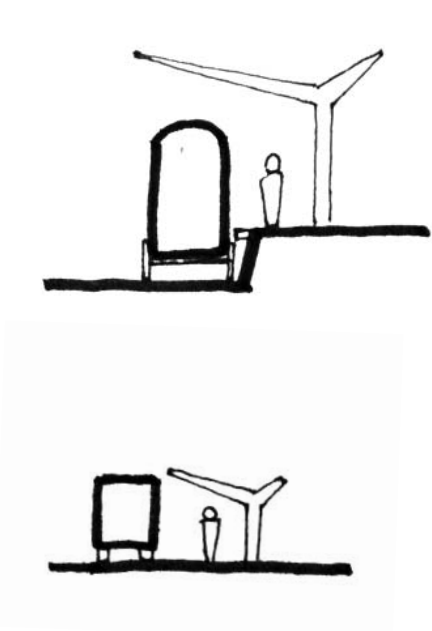
Service..... SF TBD

Residents' Houses.....

As the elderly residents near death, they have the ability to donate their small houses to the center, acknowledging that they will be preserved and always be a reminder of themselves.

Train Platforms SF TBD
Bus Stations SF TBD

There is the potential that each platform/ station contain interior spaces to allow for activities to occur. However, at this phase in the design, it seems more conceptually clear they remain as simple and primitive as possible.



Positioning
Framing
Crafting
Forming



Figure 35: a) Danish Jewish Museum; b) Memoria e Luce

Daniel Libeskind

AIArchitect: *Is it possible for a building to allow us to heal—and how so?*

Libeskind: *I think it is possible for a building—particularly a space that has been intertwined with a tragedy or a loss—to bring healing by confronting two seemingly impossible tasks: remembering the loss and using the loss as the inspiration for something that proves the victory of life over defeat. I think that is a healing process. And I think architecture, by definition, because it is a constructive act, not a destructive act, is part of the healing process.*

But I think the important thing to concentrate on is the social space, where people come together. Space that allows people to come together, space that is inspiring, space that works pragmatically but most of all connects itself with the emotional and spiritual need that every person in a great city has.³⁶

I believe that an analysis of Daniel Libeskind's projects, particularly the Danish Jewish Museum and Memoria e Luce, will contribute greatly to the proposed design. His theories on space, healing, and memory are very closely related to my own interests.

Precedent



Figure 36: Images created during the projection of the film.

Ashes to Ashes

Ashes to Ashes was intended to be performed in a six sided cave, in which images appear on the floor and ceiling, creating a fully immersive experience for the participant. The artists interviewed dozens of first responders and survivors of the World Trade Center attacks in New York City, and transcribed the material they received into music, a kind of animated poetry that provided the content for the installation.

A participant can choose to take the fastest, most linear route through the narrative, thereby experiencing the basic story being told about 9/11. Or, if they choose, at any particular scene, they can pick more stories from other witnesses who are talking about their experience of that particular time in the larger story. The viewer controls how many stories he hears in certain acts so he will not feel emotionally trapped. The interaction time to move from story to story gives the viewer time for reflection, offering distance from the material. Alternately, some stories are mandatory; giving the piece it's dramatic shape.³⁷

I am intrigued by this project; it supports my fascination with film, fragmentation, and memory, while also allowing first-hand witnesses to release the burden of what they experienced and transforming their recollection into a permanent record that will be heard for decades to come.

Precedent

¹Christine Boyer, *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments*, (Cambridge, Massachusetts: The MIT Press, 1994) 29.

²Randolph Langenbach, "The Good and The Evil: The Preservation of Monuments with a Negative Symbolic Image," in *Changing Places: Remaking Institutional Buildings*, ed. Barbara A. Campagna, Marcia F. Feuerstein, Lynda H. Schneekloth (Fredonia, N.Y.: White Pine Press, 1992), 167.

³Randolph Langenbach, "The Good and The Evil: The Preservation of Monuments with a Negative Symbolic Image," in *Changing Places: Remaking Institutional Buildings*, ed. Barbara A. Campagna, Marcia F. Feuerstein, Lynda H. Schneekloth (Fredonia, N.Y.: White Pine Press, 1992), 162-163.

⁴Robert Vibert, "Awareness, Expression, Resolution," AER, 5 November 2012
<<http://awareness-expression-resolution.com/index.php>>.

⁵"Emotional Healing- A 3 Step Process," Our Pathway Home, 5 November 2012
<http://www.cyquest.com/pathway/3step_process.html>.

⁶Shelley Hornstein, *Losing Site: Architecture, Memory and Place*, Burlington, VT: Ashgate Publishing Company, 2011) 3.

⁷Christine Boyer, *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments*, (Cambridge, Massachusetts: The MIT Press, 1994) 26.

⁸Shelley Hornstein, *Losing Site: Architecture, Memory and Place*, Burlington, VT: Ashgate Publishing Company, 2011) 83.

⁹ "The Exhibition," Titanic: The Experience, 5 November 2012
<<http://www.titanictheexperience.com/the-exhibition.html>>

¹⁰ Adolph Kharash, "A Voice from Dead Pripyat," 24 October 2012
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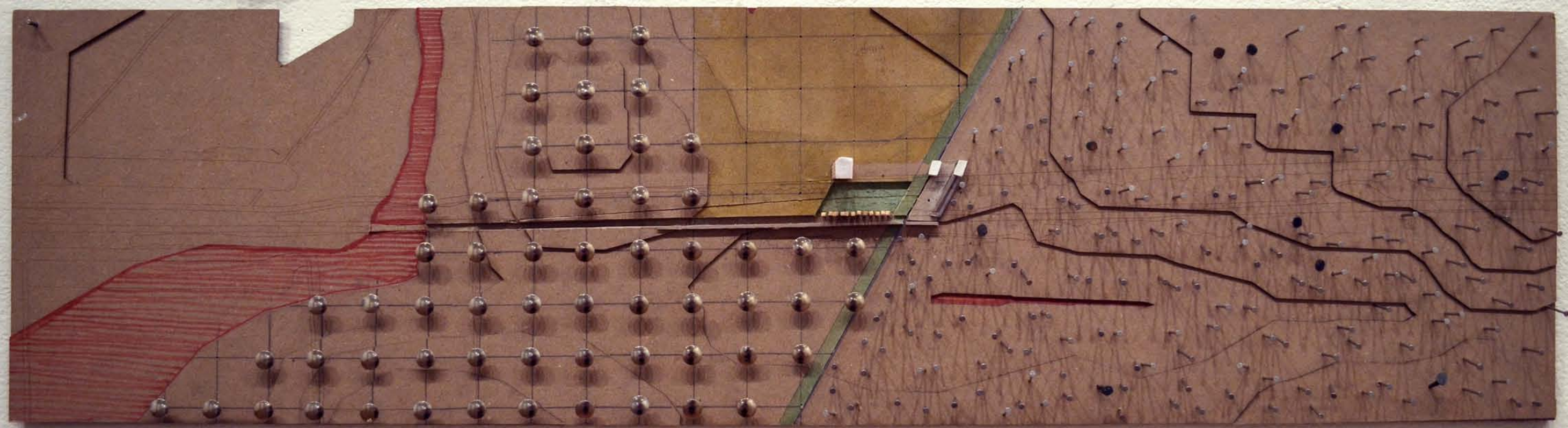
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We were leaving. I took some earth from my mother's grave, put it in a little sack. Gave it to my knees. "Bury us for leaving you!" I went there at night and I wasn't scared. People were writing their names on the houses. On the wood. On the fences. On the asphalt.

Бійна - це один річ я можу розмовляти приблизно. Чому ми прибули тут? Схернобиль? Тому що ніякий ідучий щоб не переслідувати нас з у нас. Ніякий кожний не ударить ногою нас ця земля. Це не будь хто земля зараз. Бог взяв це назад. Люди лишали це.

We were leaving - I took some earth from my mother's grave, put it in a little sack. Gave it to my knees. "Bury us for leaving you!" I went there at night and I wasn't scared. People were writing their names on the houses. On the wood. On the fences. On the asphalt.

Якщо будь хто отриманий обурений та захотіли взяти труну назад додому, вони були казані що мертвий зараз герої, ви дивитесь, та що вони більше не належали їхнім сім'ям. Вони герої держави. Вони належали державі.

No one's going to tell us anymore, we're not moving anywhere. There's no store, no hospital, no electricity. We sit next to a lantern lamp and under the moonlight. And we like it! Because we're home.

Every day I'd dream of my house. I'm coming back to it: digging in the garden, or making my bed. And every time I find something: a shoe or a little clock. And everything was for the best, it made me happy, I'd be home soon.

The war - that's the only thing I can talk about. Why did we come here? To Chernobyl? Because no one's going to chase us out of here. No one will kick us off this land. It's not anyone's land now. God took it back. People left it.

Nina speaks about her children:

The kids draw Chernobyl. The trees in the pictures grow upside-down. The water in the rivers is red or yellow. They'll draw it and then cry.

Якщо будь хто отриманий обурений та захотіли взяти труну назад додому, вони були казані що мертвий зараз герої, видивтесь, та що вони більше не належали їхнім сім'ям. Вони герої держави. Вони належали державі.

Lena describes her tremendous love for this land:

"We're not going, period. We've lived through the war, how it's radiation. Even if we have to bury ourselves, we're not going!"

Він виробляв табурет 25 до 30 разів день. З кров'ю та тиском. Його шкіра стартувала тріскаючи на його озброєнні та ногах. Він став накритий з нарівами. Коли він повернув його голову, там групка волосся лишає на подушці. Я поставився жартуючий: "Це є зручні, ви не потребуєте гробінця."

Ви вітаєтеся як довгий повністю рік може прийти та той може зупинити весь світ, може повести у вас я пам'ятаю бесіду з цим вченим: "Це є для тисяч років, він розяснив, який зовнішній. І це перекладений у часі роки мільярду. Та для його чотирнадцять мільярд років. П'ятдесят, один сто, два сто для того що? Пова що моя свідомість не могла полати. Я не міг навіть зрозуміти більше: що рідко?"

Ніякий ідучий щоб не обдурити нас більше, ми не рухаємось anywhere. Там ніяка крамниця, ніяка лікарня. Ніяка електрика. Ми сидимо біля керосинової лампи та під місячним світлом. Та ми любимо це! Тому, що ми домашні.

Lena:

"Ми не ідемо, період. Ми прожили через війну, зараз це - радіація. Навіть якщо ми повинні поховати собі, ми не ідемо!"

Lena talks about her past life:

"And I was happy once. All my children were born of love. I gave birth like this: boy, boy, boy, and then girl, girl. I don't want to talk anymore. I'll start crying. We'll wait in Chernobyl. This is our home now. Chernobyl is our home, our motherland. (She smiles suddenly.) The birds here are the same as everywhere."

I have seven children. They all live in cities. I'm alone here. I get lonely, I'll sit under their photographs. I'll talk a little just by myself. All by myself.

Memory



Experience of Kitty Hart



Experience of Typical Visitor

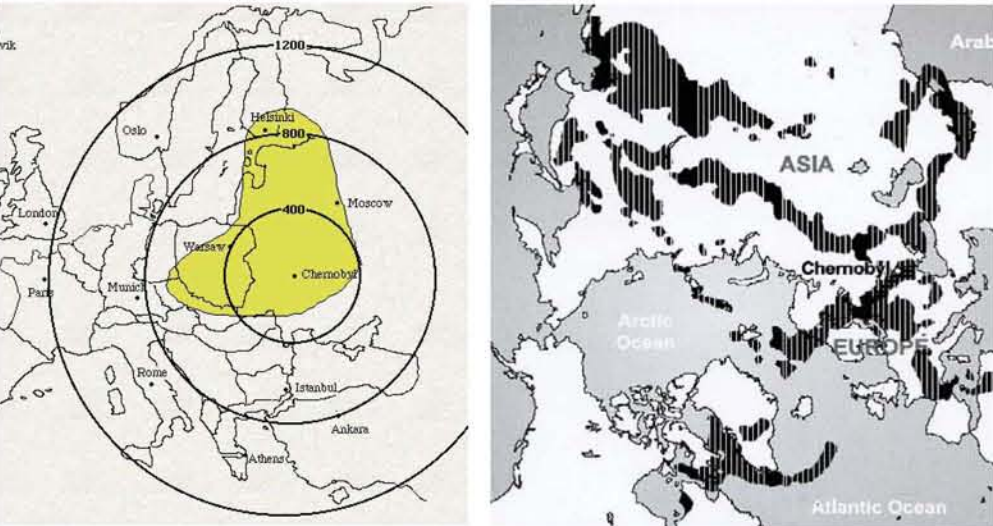
You see grass, but I don't see any grass. I see mud, just a sea of mud...open my eyes and see grass. Close my eyes and see mud...I knew I ought never to have come back, because it has proved I've never been away.

Kitty Hart (experienced during a return to Auschwitz)

Thesis

How can architecture coalesce memory and fragments of a site's past to transform pain or confusion following a traumatic event into a valuable experience—including a raised awareness or a moment of acceptance or reflection—that promotes emotional healing of an individual and a community?

Locating



Radioactive Cloud of 1986 Map of Chernobyl Fall Out

The Contamination

An overall area of 146,300 km² (equivalent to 36.14 million acres) experienced ground contamination as a result of the nuclear explosion. Within only a few days, radioactive elements had absorbed into the soil, water, and sediments. 14 On 28 April, a nuclear power station in Sweden, 130 km north of Stockholm, first detected the radioactive cloud outside of the Soviet Union borders. 15 Surrounding forests were immediately contaminated by the fallout. Falling deciduous leaves "raised the radiation level of other objects in the environment and had to be removed, but definitely not burned." 16

The northwestern winds were responsible for pushing the radioactive cloud over much of Europe and Asia. Entire livelihoods changed overnight as people were forbidden to fish in lakes, precious water sources that maintained the republics' agricultural wealth had to be cut off and supplied from other rivers.18 In many cases outside of the Exclusion zone, radiation levels returned to normal within a few months. Unfortunately, hundreds of thousands of people are still suffering from their brief exposure.

27 years later

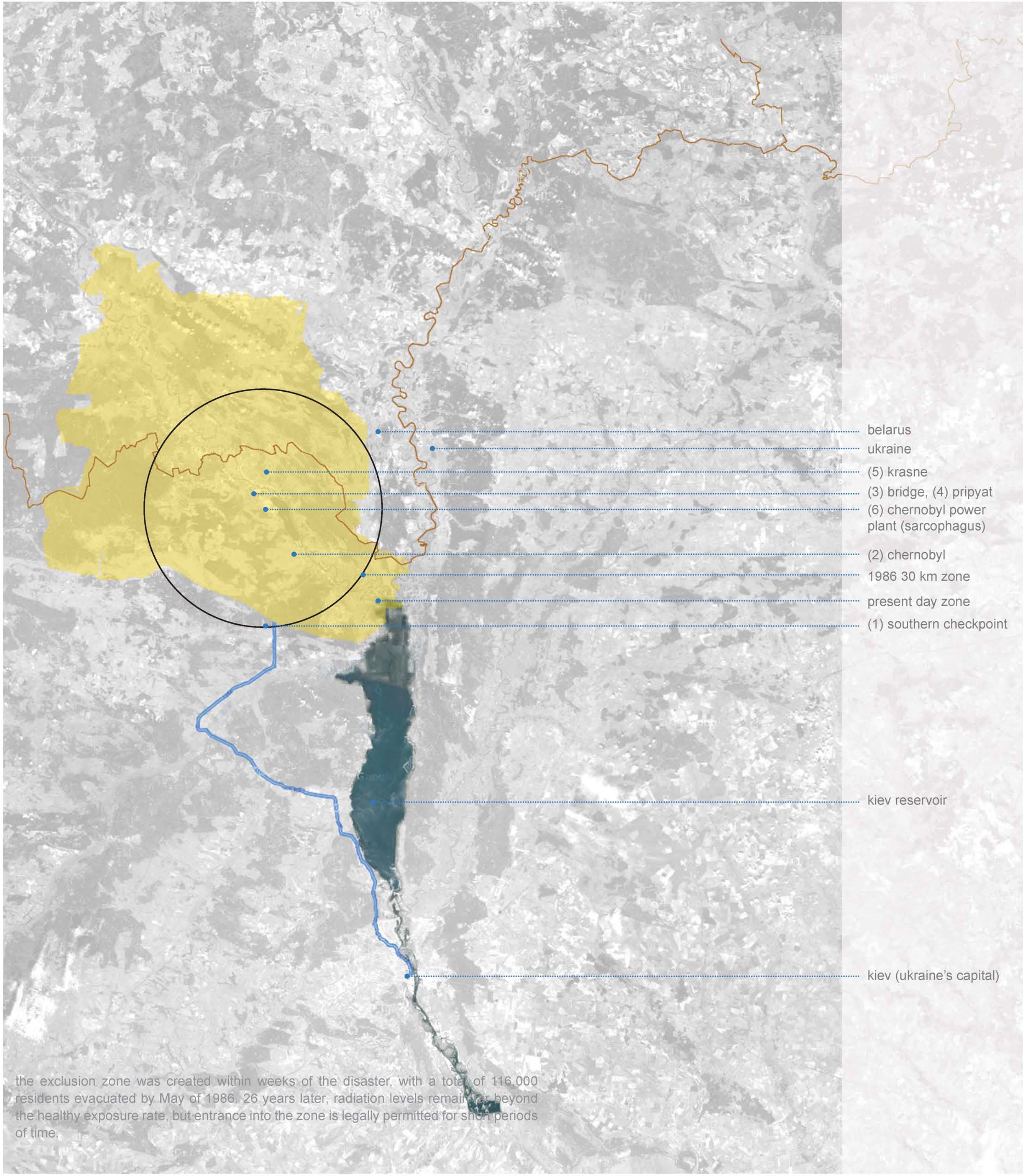


"[It] is an ongoing trauma of the highest magnitude. The psychological consequences are severe," says Teter. "Everywhere a loss of faith in a future -- hopelessness and helplessness is expressed," exhibiting symptoms of "psychic numbing" (loss of feelings, interest, concentration, faith, hope), depression, hyper-ness, sleeplessness, and anxiety triggered by recollections of the trauma.

Those displaced by the accident suffer from psychological impacts and have, due to a victim mind set, generally anticipate a shorter life expectancy. Although claiming to be worried about their health, they exercise poor diet and escapism through alcohol and tobacco use.

The memories and experiences of the residents are extremely important as they are the remaining stories of life and happiness within the zone. Unfortunately, a large percentage of them lack proper diet and health precautions due to their inherent isolation.

While an intervention is required to steward the health of both groups, a greater endeavor is to preserve their memories and evoke emotional healing through properly reaffirming their value and role within their society, their community, their families, and themselves.



the exclusion zone was created within weeks of the disaster, with a total of 116,000 residents evacuated by May of 1986. 26 years later, radiation levels remain at or beyond the healthy exposure rate, but entrance into the zone is legally permitted for short periods of time.

Healing



- 1

exposure

becoming fully aware of one's emotional distress, often through a forced remembrance of a painful event
- 2

expression

transcending the barrier between mind and emotion, intended to evoke physical expressions of the feelings to become more aware of and to begin accepting them
- 3

reflection

finding a feeling of peacefulness and acceptance towards the event that triggered the pain; a constructive insight between the person, place and event

Bearing witness to tales that need to be told, even though the narrator re-experiences pain in the telling, is a way for individuals and communities to get past trauma: **to acknowledge it and begin to heal.**

People need to tell the story and can tell the story, no matter how bad it is.

Diana Scott
Healing in the Shadow of Chernobyl



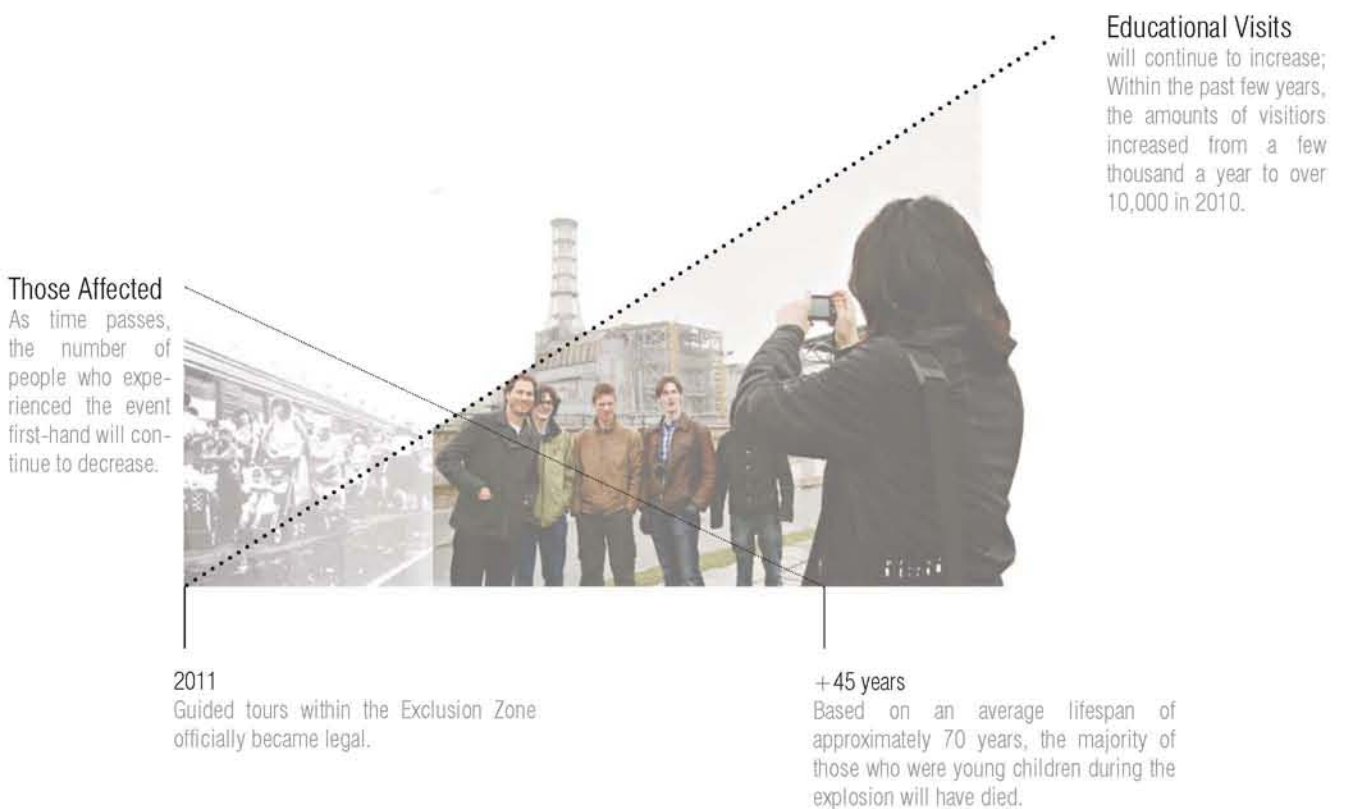
- 26 april

The remaining debris of Reactor No. 4.
- 27 april - 10 may

Evacuation, taking only the essentials.
- 26 years later

A house within the 30 km exclusion zone.

The 30 km Exclusion Zone radiating from the Chernobyl Nuclear Power Plant demonstrates the fatal consequences of using nuclear technology to meet the needs of society. The slow attempted recovery that followed the Chernobyl incident caused permanent physical and emotional scars in addition to those already inflicted immediately after the reactor exploded. Returning to the site would likely affirm the importance of memory to those involved. In contrast, the Fukushima Daiichi explosion proceeded with a quick re-population of the surrounding cities, demonstrating Japan's ability to quickly reestablish themselves and move on through encouraging an efficient recovery and likely devaluing the communal memory surrounding the event.



- 1_ southern checkpoint

Entrance into the Exclusion Zone currently requires being admitted through a checkpoint located at the 30 km marker. The site acts as the physical threshold into the zone.

This is an important portion of the journey, as it marks the perceived barrier between the clean and the contaminated. Visitors will likely experience a bit of anxiety and anticipation as they commit to entering the Exclusion Zone.
- 2_ chernobyl

The actual city of Chernobyl lies approximately 15 km southeast of the power plant. The radiation cloud released from the plant traveled northwest, preventing high contamination levels within the city. A few buildings still operate within this small town, including a hotel and a restaurant that prepares food gathered outside of the zone.

Significant places include the Chernobyl entrance sign and the Monument to the Chernobyl Liquidators.
- 3_ the bridge of death

In the hours following the explosion, northwestern winds directed the radioactive cloud towards Pripjat, hosting a pre-accident population of nearly 50,000 inhabitants. Several children and adults, curious to see the fire blazing from the power plant, stood on a railroad bridge, now referred to as The Bridge of Death, and quickly fell ill.

The Yaniv Railway Station, connecting to the tracks lying under the bridge, was the final departure point for several of Pripjat's residents.
- 4_ pripjat

Once known for the 33,000 rose plants and 250,000 shrubs that adorned its streets and public plazas, Pripjat's close proximity of two kilometers to the power plant subjected it to extremely high levels of radiation.

Though attesting to the passing of time and lack of maintenance, several buildings within the city have become iconic among visitors including the Amusement Park and the Palace of Culture (still displaying artifacts of the Soviet Era).
- 5_ krasne (abandoned village)

The small, almost entirely abandoned village of Krasne— seven kilometers north of the power plant— displays the affects of the catastrophe on a location much smaller than Pripjat. Though few residents still inhabit the village, it has mostly become overgrown by nature and time.

However, St. Michael's Church has remained entirely intact and displays magnificent murals. It is said that the village's few inhabitants congregate in this sacred space on certain occasions.
- 6_ the sarcophagus

The most critical piece within the exclusion zone is the epicenter: the Sarcophagus. Though visitors are not allowed to venture inside, its overshadowing form constructed of precast concrete elements attest to its magnitude.

The concrete shell is forming cracks that will eventually release the potent radiation harvesting within. Currently, enormous steel arches are being constructed adjacent to the reactor to be positioned over the Sarcophagus.

Two Primary Reasons for Visiting Zone

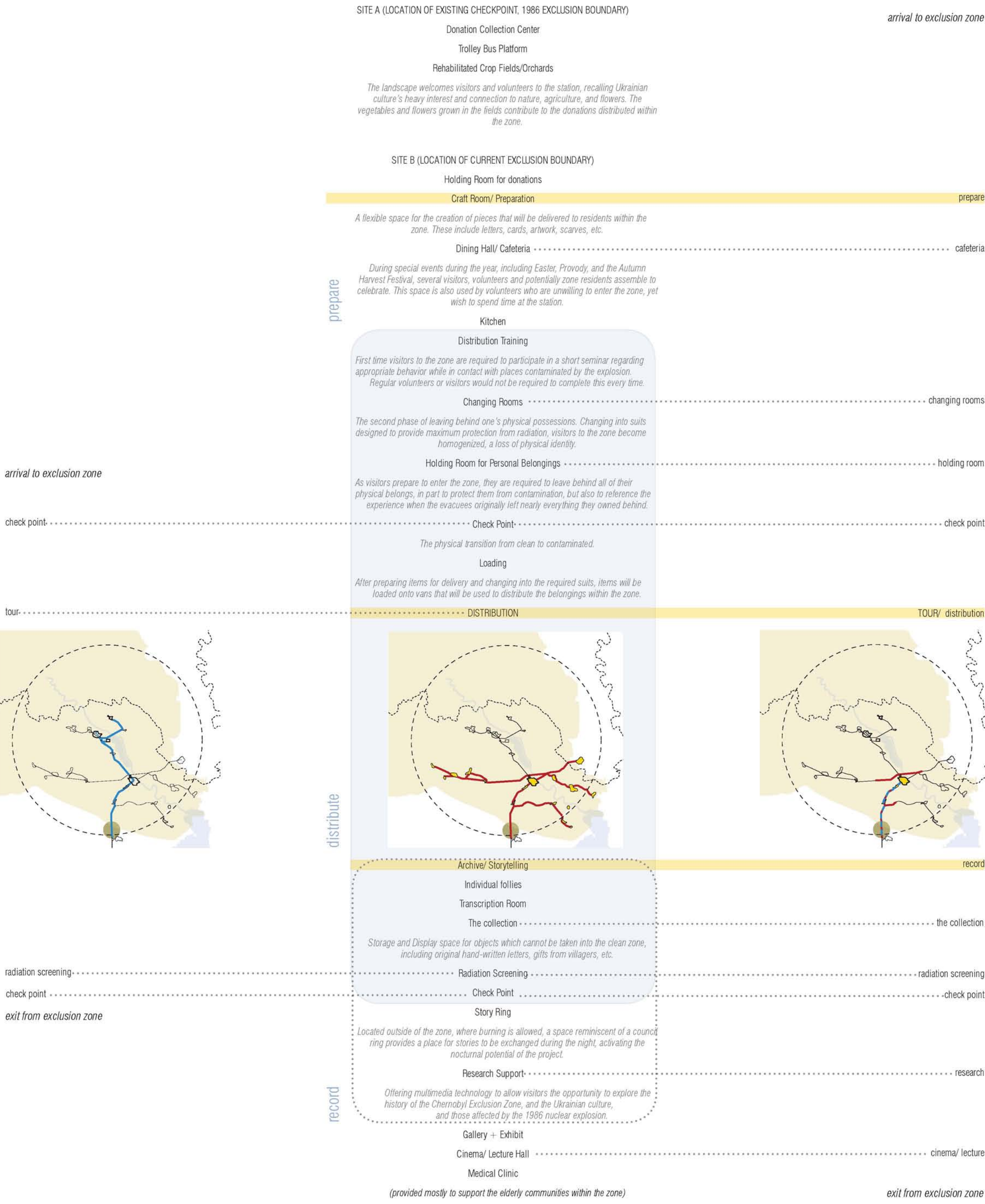


typical tourist experience (current)



program required to support humanitarian efforts

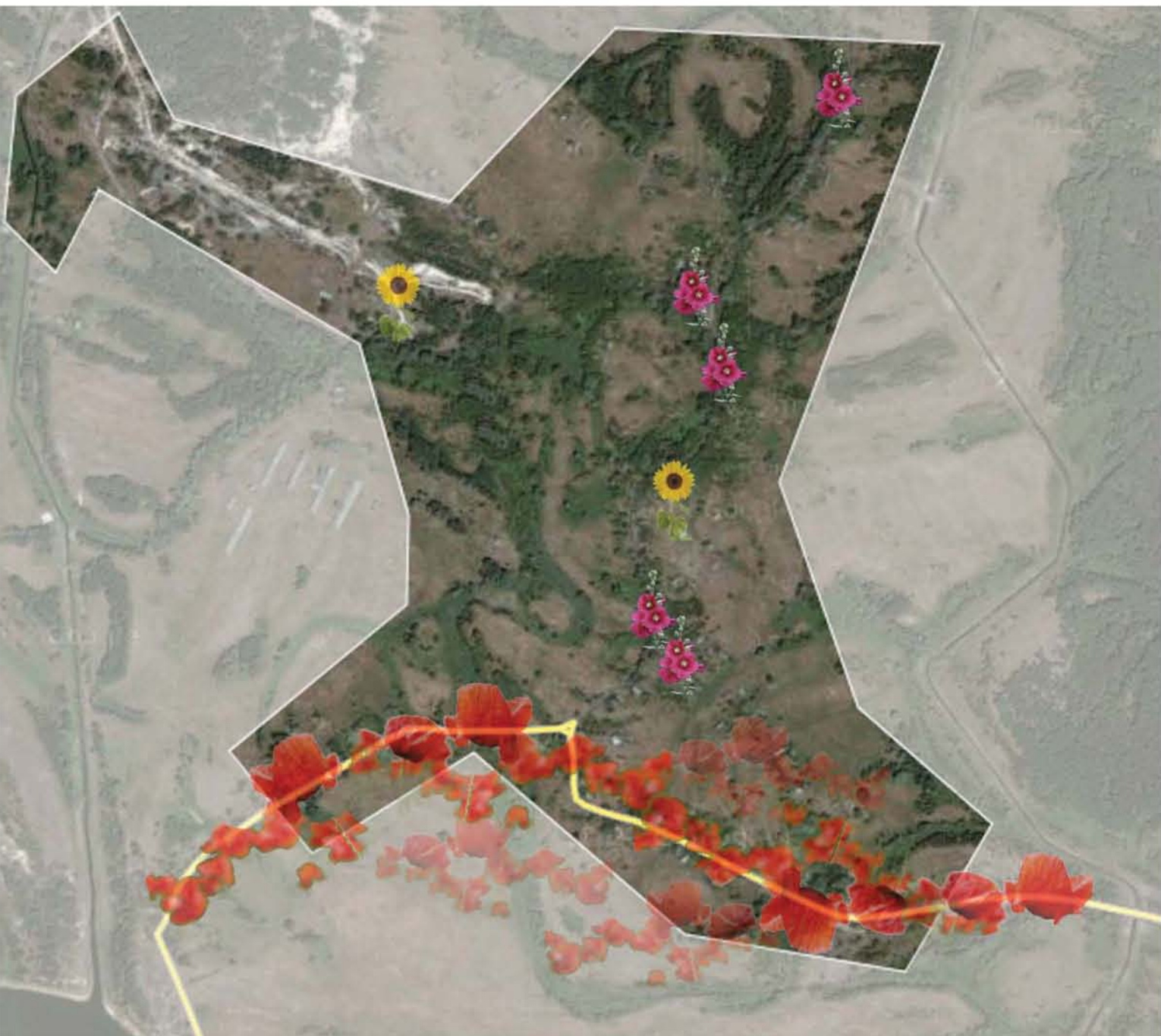
proposed overlap between tourist and humanitarian



Marking the (re)Inhabited Village

To celebrate the courage and commitment of those who faithfully returned to their villages, a planting scheme is established to mark their presence. The strategy reinforces the importance Ukrainians traditionally place on nature and flowers, a step towards remembering and reclaiming their cultural identity.

In addition, the pathways taken by volunteers in effort to deliver physical and emotional gifts are planted with red poppies, which in time will spread as their seeds are carried away by the wind.



For the living



For the deceased



For the hero



Sonyashnyk

Ukrainian people always loved flowers and used them to convey their ideas, feelings and emotions. Sun Flowers (national flower): The love of Ukrainians for these flowers is reflected in literature, music, crafts and arts... And not only do they admire sunflowers, but they LOVE their seeds, and use sunflower oil in everyday basics (in salads, for frying, baking)... Probably, you won't find a Ukrainian who doesn't like tried sunflower seeds!

Flowers please the eye and sooth the soul. When you are away from home, seeing flowers that used to grow in the garden of the house you grew up in, causes the flood of reminiscences. Ukrainians of the old times sincerely believed that flowers were a special gift from God. If anything, the presence of flowers in the everyday life of Ukrainians has grown considerably — and seems to continue to grow. Hardly any occasion of some significance can do without flowers which are presented in bouquets of considerable sizes.

Sunflower in Ukrainian folklore and tradition is the symbol of the solar energy, of the vigor of life and of well-being. In Ukrainian heraldry, the sunflower symbolizes fertility, unity, solar power and fecundity. It was believed that sunflowers seeds should be planted before sunrise or after sunset — if you do that then the yield will be much better and the birds will not pick out too many of its seeds. The sunflower keeps turning its head as it follows the progress of the sun across the sky, and when the sun hides behind the horizon, the sunflower's head droops sadly, and ponders the profound issues of life. The sunflower reminds us that the sun should be respected as the life- and light-giver, and that the humans should respect their native land in a similar manner.

The sunflower has lowered its head,
The girls' song flies through the gathering darkness.
I'm listening to that song that comes from afar,
The swift passing of my youth saddens me...



Mal'va

Malow symbolizes love for one's native land, for one's parents and for one's home. This plant reminds one of one's spiritual and national roots, and of one's ancestors. The malow features prominently in folk culture; it is hard to imagine a traditional Ukrainian home without malows in one form or another — both as living plants or plucked flowers, and as stylized representations in decorative embroideries or folk paintings.

The times when practically every Ukrainian peasant hut had malows in the front yard are not too distant in the past. When you were leaving your home for a long journey, the malows in your yard, as you were saying goodbye to them, reminded you that "it is the sweet memory of the land where you were born that you will always carry in your heart."

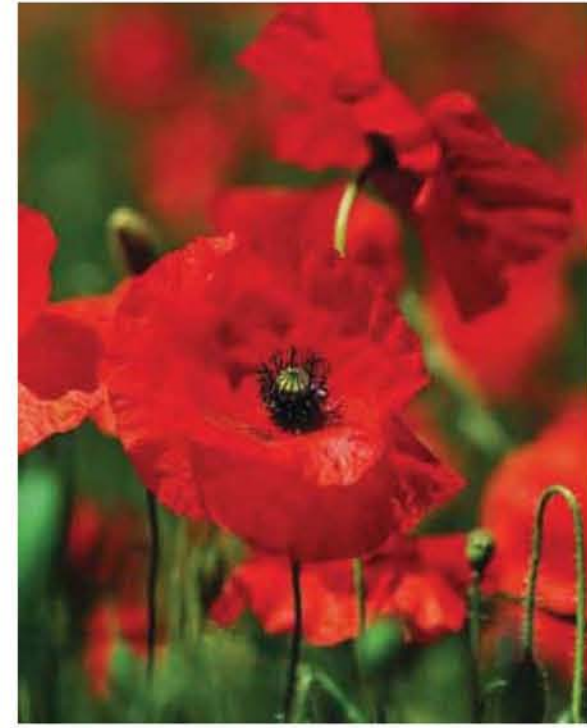
The malows have fallen asleep in the garden,
The moon has climbed up high into the sky.
But the mother can't sleep —
She is still waiting for her son to come back...



Barvinok

Periwinkle is a symbol of eternity and of being, of life force; it is a harbinger of spring. It is a reminder of the "dear departed." However, if periwinkles growing at the grave are there to conjure up the image of the dead, periwinkles in wedding wreaths signify the eternal love of those who make their marriage pledges.

Halya carried water from the well to the house,
Ivanko, like a blooming periwinkle, followed her...
...Periwinkle, periwinkle, help bring
Ivanko back — I'll take a good care of him,
Like I've been taking care of you...



Mak

Poppy symbolizes infinity of the universe and at the same time it suggests sleep and oblivion. The poppy capsule is a symbol of quietude. Poppies feature prominently at two of the religious festivals — Makoviy and Spas; poppy seeds are an indispensable ingredient of kutyra, a dish made of wheat, poppy seeds and honey, and consumed at Christmas.

The poppy thanks to its blooms that are so tender and wilt in no time, is also a symbol of youth and beauty that pass so fast. A wreath made of poppy flowers is likened to girls' virginity — the petals are damaged and are lost so easily. Poppies were believed to have a magic power and be helpful against all sorts of evil forces and evil influences; they were believed to be a good charm against witches.

The girl is collecting poppies,
She's tormented by a wicked love,
She is crying over red poppies,
She's crying over the unrequited love...

The Interstitial Zone
1"=250'



The nearly mile and a half distance between the original 1986 boundary and the current test boundary creates a unique condition, a threshold between the realms of the clean and contaminated.

The site of the original checkpoint has been modified to serve the new facility. Programmatic elements at this location include a donation drop-off center, parking for personal vehicles, a prayer garden (constructed in 2010), and an initial check station for all who enter the zone.

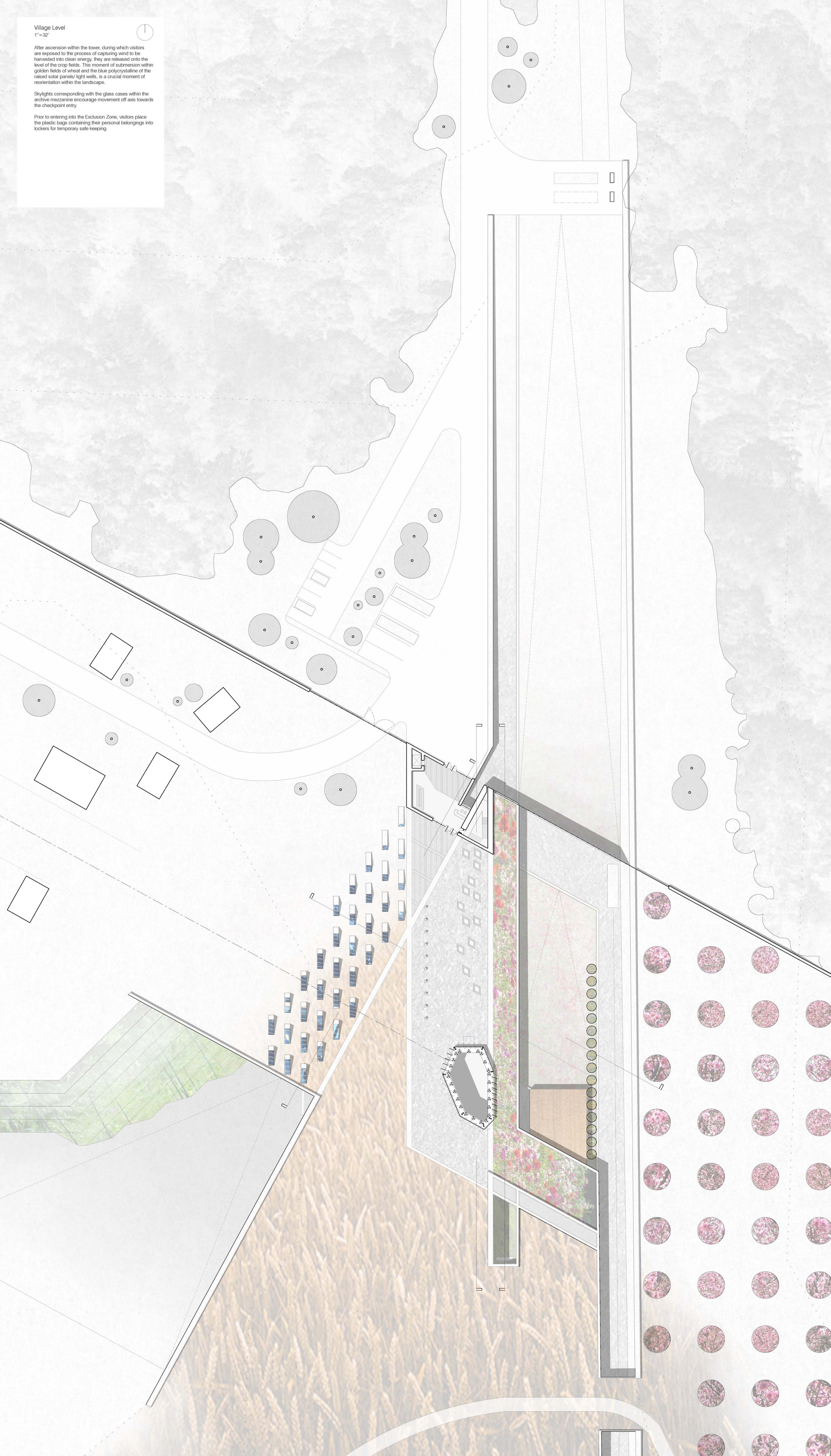
To support the humanitarian efforts to supply the villagers with clean, healthy food, this space is used for growing crop produce and fruits taken from orchards. The lowest topographical levels are planted with flowers rather than agriculture to prevent exposure to any residual contamination within the water tables.

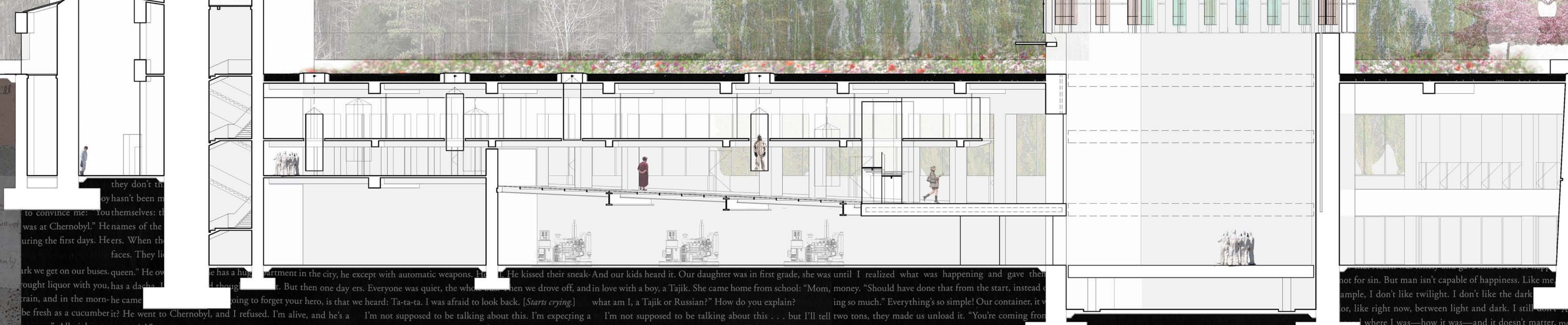
A new village located adjacent to the new border station recalls the layout of traditional Ukrainian villages; the church terminates the important community zone created on axis with the wind tower.



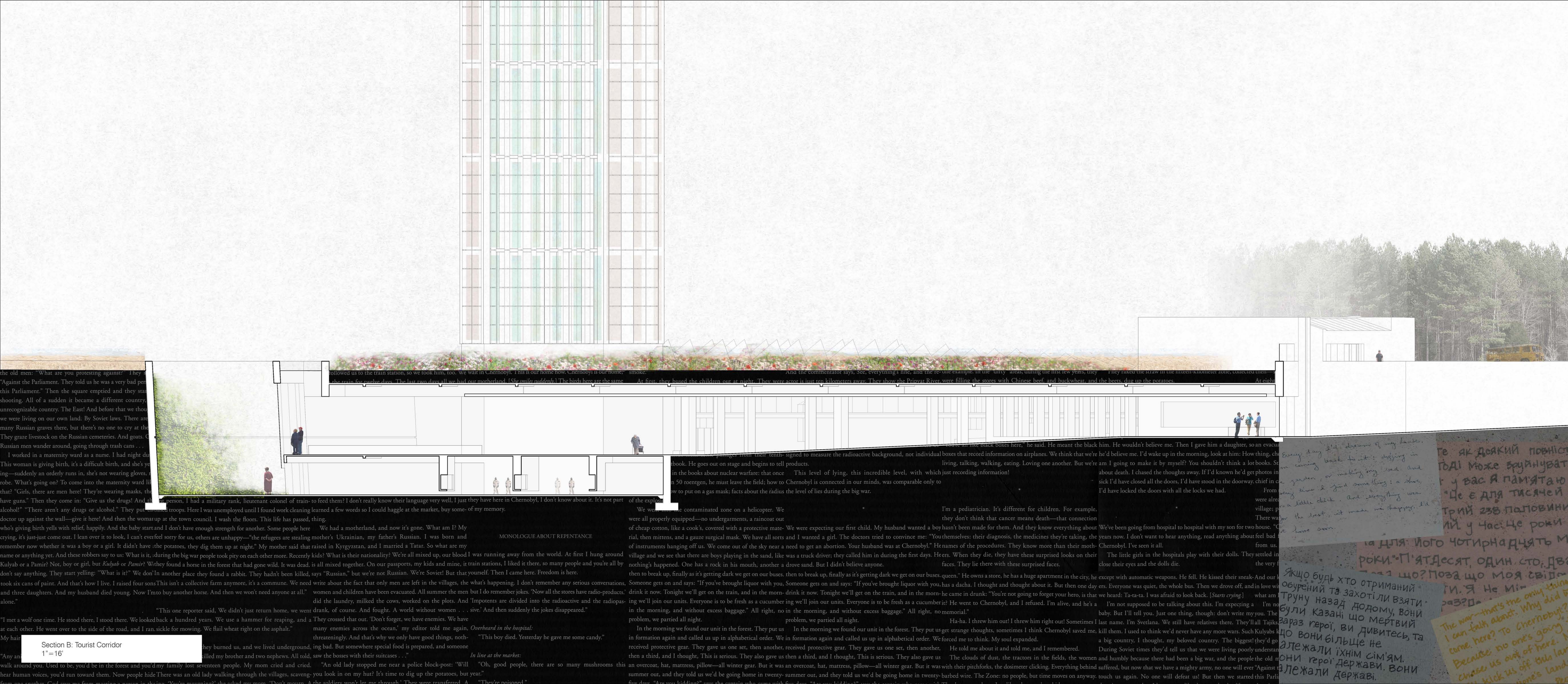
Skylights corresponding with the glass cases within the archive mezzanine encourage movement off axis towards the checkpoint entry.

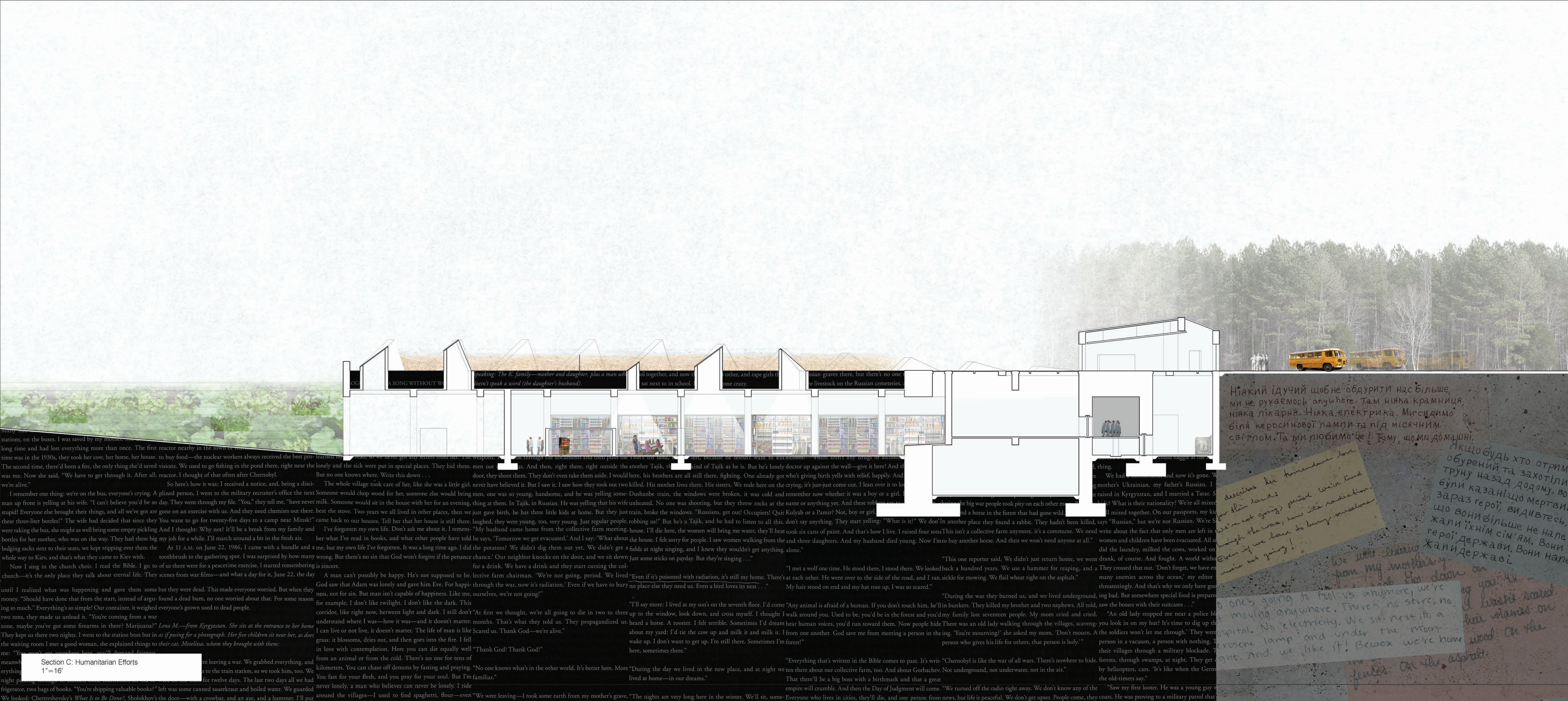
Prior to entering into the Exclusion Zone, visitors place the plastic bags containing their personal belongings into lockers for temporary safe keeping.





1"=16'





Ніякий ідучий щоб не обдурити нас більше, ми не рухаємось anywhere. Там ніяка крамниця, ніяка лікарня. Ніяка електрика. Ми сидимо біля керосинової лампи та під місячним світлом. Та ми любимо це! Тому, що ми домашні.

Якщо будь-хто отримав обурений та захотів туди повернутися, то ми його не пустимо назад додому, воно буде казати, що мертвий, зараз герої, видивтеся, що вони більше не напечали їхнім сім'ям, Вони герої держави, Вони напечали держави.

Section C: Humanitarian Efforts
1°=16'

Section C: Humanitarian Efforts
1°=16'

A field of objects within the landscape serve as a filter between the sequence to the check point and the adjacent village. The southern face is mounted with polycrystalline solar panels, whose deep blue hues complement the golden wheat of the surrounding fields. The northern facade is entirely devoted to a skylight that offers the humanitarian program below light throughout the day.

The gallery acts as the filter between the tourist route and the humanitarian wing. Designed to be extremely flexible in order to support maximum usage, the space accommodates the display of physical objects as well as providing space for film projection.

Suspended from the concrete structure above is where the archiving of the letters and memories occurs. Glass display cases can be raised and lowered between the two levels, creating a unique filtering experience for visitors.

Steel grating separates the exhibit space from the generator room below. The generators, responsible for transforming the harvested wind power into usable energy for the facility and the adjacent village, offer a consistent humming that is both comforting and curious. The sequence through the building allows visitors at one point to occupy the lowest level and gain a better understanding of the generators purpose and function.

A suspended wooden ceiling plane implies movement along the corridor; its edges have been pulled back in order to expose the actual concrete structural system above.

Kiev
0 miles
00:00:00

The nearly two hour drive from Kiev into the Chernobyl Exclusion Zone is threaded through several villages, exposing the traditional way of everyday living. The zones between villages are used for agricultural production, a primary source of income and living for the Ukrainian culture.

There are two intersections of the road with the Kiev Reservoir, a man-made body of water containing large amounts of contaminated silt. At these intersections, fields of wind generating planes are visible from the roadway, an element that gains additional meaning upon visiting the Exclusion Zone.

Initial registration/ passport check Trolley boarding

Retaining use of the historical checkpoint structure, all who enter the zone must show their passport and register to be entirely accounted for.

To maintain utmost security to ensure the safety of all visitors, a trolley takes visitors along the 1.3 mile journey between the 1986 boundary and the scientifically tested boundary (location of proposed border station)

Regardless of intent for coming into the zone, all guests must wait for the trolley. While this period of time may only last 15 minutes, it allows for a unique intermingling between all visitors

Arrival at 1986 Check Point

60 miles
approx. 2 hours travel time

Upon arrival at the 1986 Exclusion Zone boundary, visitors gain their first exposure to the humanitarian efforts providing relief to villagers within. An initial donation center is located outside of the 1986 barbed wire enclosure to accommodate for volunteers who are willing to help, but unwilling to pass the threshold into the zone.

The original governmental check point structures built immediately following the disaster in 1986 are primarily remembered only through the presence of their foundations, though the actual check point crossing is preserved.

Entry into Tunnel

After the second intersection with the Humanitarian pathways that spread across the landscape, the tourist path begins carving into the earth, creating a powerful horizontal datum that cuts through the earth. The experience deprives the visitor from the peripheral views of the fields being worked, instead refocusing the prominence of the axis leading into the zone and the ever changing sky above.

Reaching a maximum depth of 40', relief is found by the canting of the right wall, splaying to allow southern light to cleanse the space. A cherry orchard above provides peaks over the edge, hinting to activity above. Spring blooms will shower petals into the space.

Arrival into Court

At last, the boundary is reached. A simple plane of glass delineates the border threshold between what is considered clean and contaminated.

Reflections cast upon the glazing allows a visitor to project himself into the zone, foreshadowing the experience that is to be had. Those returning from a visit into the zone can be seen descending back towards the facility, still wearing their protection suits.

The courtyard is planted with indigenous plants, as well as species that played a significant role within the cities prior to the 1986 disaster. These include rose bushes (Pripyat was renown for the spectacular annual display of roses), and prominent Poplar trees that create a transition from the concrete enclosure of the Tunnel to the open courtyard.

Exposure to Archive as Process/ Exhibit

After entering the building, users are oriented on an axis that delineates the sequence of movement. Facing south, the axis is terminated by a sunken moss garden, a tranquil space that allows for contemplation prior to entering the tower. Facing north, the axis visually leads users to the sloping courtyard beyond.

As one descends into the building, the right side wall begins to deteriorate, challenging the notion of a built boundary. Initially, views into the archiving room are offered through staggered concrete walls, the coves scaled to comfortably hold one visitor.

Continuing down, the glazing that separated the archived zone from the main corridor disappears, encouraging the typical tourist to move off of the axial sequence into the Exhibit space.

Views into the adjacent humanitarian wing prompt visitors to understand that the building not only serves the tourist, but perhaps more importantly, the volunteer efforts providing physical and emotional relief to the villagers.

Lecture Hall + Zone Training

Terminating the dominant axis of the sunken court, the Lecture Hall symbolizes a crucial component of the project's mission, which is to educate visitors about the facts and effects of the Chernobyl disaster.

The wooden structure represents the union of building with the landscape, an important relationship that responds to the fact that the reappearance of the healthy plant life within the zone was an indication that levels of radiation contamination were slowly returning to safer levels.

Underneath the Lecture Hall, a space sharing the same foot print is used for Zone Training. The training accommodates for the range of visitors into the zone, whose level of precaution regarding radiation exposure likely vary greatly, and ensures every visitor is aware of the proper behavior within the zone.

After completing the training session, visitors enter the suiting room, where they place protective body suits over their clothing. Each guest places personal belongings including wallets, purses, and jewelry into clear boxes which will be collected.

Tower Entry

Accessing the checkpoint entry level above requires a vertical ascension, a moment opposing movement on the horizontal plane. Piercing through the massive concrete foundations of the 220' wind energy tower, visitors are immersed into an environment controlled by nature.

The massive 30' vertical axis wind turbines are veiled from site from the outside by operable glass louvers that control the internal air pressure of the tower to ensure a maximum collection of wind energy. The opening of the louvers throughout the seasons becomes a marker of time, of season, of place.

Once within the space, the entire complex structure of the tower, including the steel structure and the turbines themselves, create a spectacular visual effect; the rotation of the turbines makes the invisible wind visible, an effect responding to the imperceptible danger of radiation. The ephemeral acoustic interlude between the wind and the turbines contributes to the experience.

Departure to destination

Upon exiting the tower, visitors are oriented on axis with the checkpoint. Submersed within the golden fields of wheat and blue solar panels, visitors are exposed to a living community, sustained by their reliance and dedication to the surrounding fields.

Once within the checkpoint, visitors place the boxes containing their personal belongings into lockers for safe keeping. Buses are the primary mode of transportation within the zone; humanitarian volunteers and researchers have the option of driving smaller vehicles as needed.

For many temporary returnees, a crucial moment of emotional healing will occur during the time spent distributing relief to the villagers. Reminiscing together about their lives within the zone prior to the disaster, as well as their experiences during and following the event, prompts the temporary returnee, as needed, to move beyond the stigma he may have regarding talking about the incident. By supplying fellow Ukrainians with support, the temporary returnee can acknowledge his ability to transcend the victim mind set and adopt that of a hero.

Reorientation

After visiting within the zone, the bus returns near the border station. Guests descend once more towards the building, re-confronting the glazed wall that separates the clean from the contaminated.

The Archive Room is the first space to greet visitors upon their return, encouraging them to record the stories they heard/told during their time within the zone.

After going through the decontamination room, visitors shed their protective suit and reclaim their personal belongings. They enter into the humanitarian wing, a gesture that encourages them to interact and volunteer.

On their leisure, guests are able to filter back through the exhibit and leave the border station. The trolley takes them back to their personal vehicles.

Driving back to Kiev, the fields of wind towers located at the Kiev Reservoir have an entirely new meaning.







